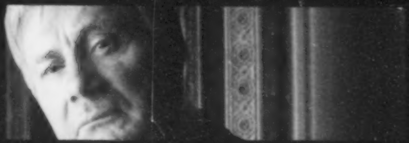
How to Get Ahead Despite a Weak Boss: Held back by an unsupportive manager? Learn five ways to advance your IT career anyway. PAGE 26



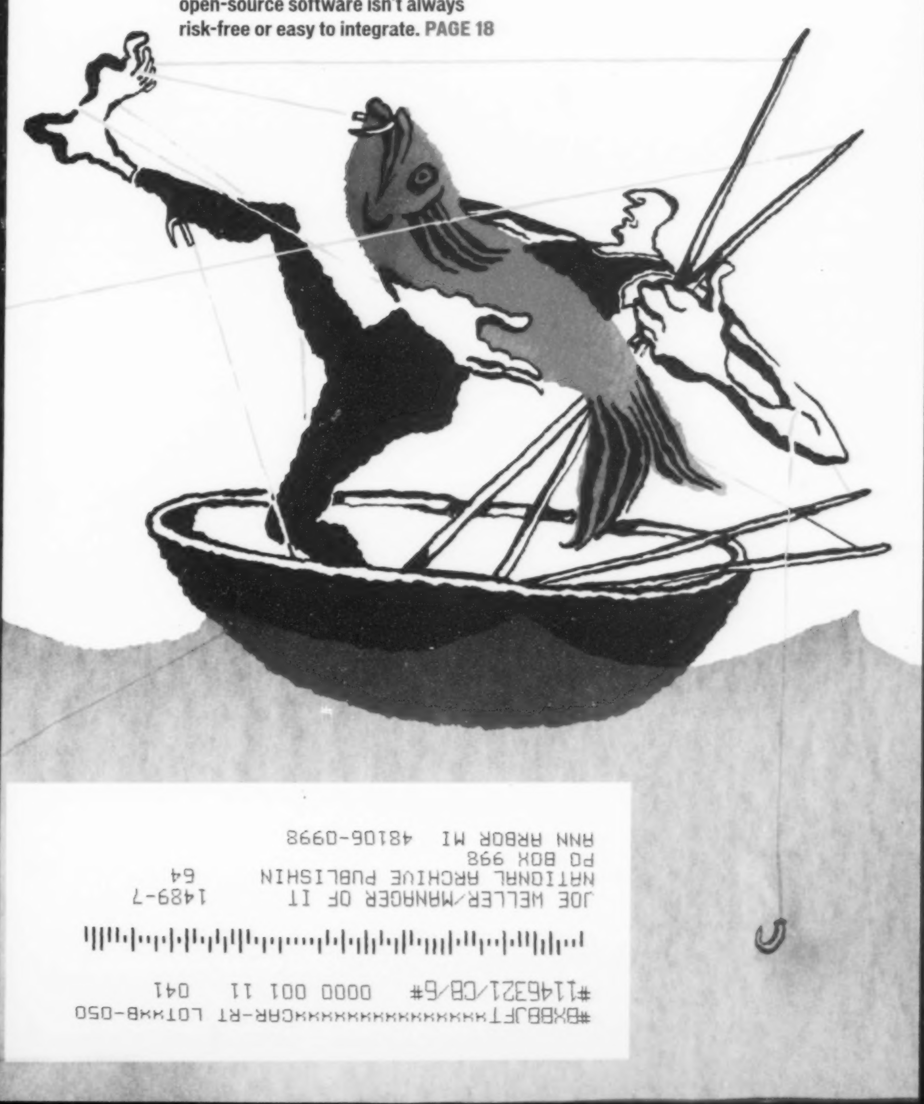
COMPUTERWORLD®

Peer Perspective. IT Leadership. Business Results.

MAY 10, 2010 | VOL. 44. NO. 9 $5/COPY

The Hidden Snags In Open Source

You might reel in savings. But open-source software isn't always risk-free or easy to integrate. PAGE 18



#BXBBJFT*************CAR-RT LOT**B-050
#1146321/CB/6# 0000 001 11 041
JOE WELLER/MANAGER OF IT 1489-7
NATIONAL ARCHIVE PUBLISHIN 64
PO BOX 998
ANN ARBOR MI 48106-0998

Inside

News Analysis

HP hopes its Palm buy will make it a major smartphone player, but analysts are skeptical. PAGE 10

McAfee struggles to placate firms crippled by its faulty antivirus update. PAGE 12

The Grill: Cisco CTO Padmasree Warrior says the future of the Internet is the combination of voice, video and data for collaboration. PAGE 14

Opinion

Scot Finnie: It's time to start talking standards for cloud computing. PAGE 40

Security

How did all these iPads get onto our network? PAGE 32

Careers

Many companies are failing to cultivate employees' long-term loyalty during the recovery. PAGE 36

COMPUTERWORLD.COM

Office is in.
Exchange is in.
SharePoint is in.
SQL Server is in.
Dynamics CRM is in.
Windows is in.

The most widely used software in the world is now made for the cloud. We're all in.

Find out more at microsoft.com/cloud

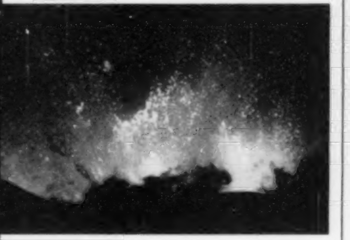
Microsoft

Inside

COMPUTERWORLD ■ MAY 10, 2010

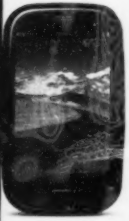
■ HEADS UP

4 IT shops need to update their **business continuity** plans to address travel disruptions caused by **volcanic eruptions.** | The EPA is drafting **Energy Star standards** for **enterprise storage** systems.



6 A university CIO says the future is **mobile devices** and **desktop virtualization** – not traditional **desktop PCs.** | **Stratus** marks its 30-year anniversary with a **contest** to find the longest-running and most reliable **fault-tolerant servers.**

■ NEWS ANALYSIS



10 HP Faces Rocky Road With Palm Buy. Hewlett-Packard hopes Palm can make it a contender in the mobile market, but it will face big hurdles as it challenges products that are more popular among business users and app developers, analysts say.

12 Faulty McAfee Update Burns IT Execs. The security vendor has taken steps to appease angry business customers whose systems were crippled by a faulty antivirus software update that it distributed late last month.

■ OPINIONS

34 Government IT boring? Far from it, says **Thornton A. May.**

40 Scot Finnie thinks it's time we started talking about standards for cloud computing.

■ DEPARTMENTS

14 The Grill: The network is still the glue, but Cisco CTO **Padmasree Warrior** says video now drives a lot of the switch and router giant's strategic decisions.

32 Security Manager's Journal: **iPad Intro Brings a Nasty Surprise.** The company hasn't bought any iPads. So, why are so many suddenly on the network?

36 Career Watch: Companies aren't doing enough to motivate workers to stay on board through the recovery.

39 Shark Tank: Pilot fish riles a manager when he asks why he needs a *new* application to notify the five people in his department that something happened.

■ ALSO IN THIS ISSUE

Online Chatter	2
Company Index	39

■ FEATURES

18 Hidden Snags In Open Source

As IT departments struggle with tight budgets, many are taking another look at open source. Current users say cost savings and other benefits can be easy to reel in, but there are hitches to beware of as well.

24 Blending in Open Source

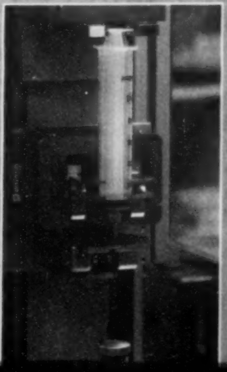
Experienced IT executives explain how they overcame the challenges of integrating open-source and proprietary applications.

26 How to Get Ahead Despite a Weak Boss

You're ready to advance, but you've got an unsupportive manager. Here are five ways to boost your IT career anyway.

30 A Robot in The Pharmacy

2009 *Computerworld* Honors award winner Intelligent Hospital Systems developed a robot that fully automates the preparation of intravenous drugs in hospital pharmacies, which saves costs and prevents human errors.



COVER ILLUSTRATION BY BELLA MELLOR

COMPUTERWORLD
P.O. Box 9171
492 Old Connecticut Path
Framingham, MA 01701
(508) 879-0700
Computerworld.com

■ EDITORIAL

Editor in Chief
Scot Finnie

Executive Editors
Mitch Betts, Julia King (events)

Managing Editors
Michele Lee DeFilippo (production),
Sharon Machlis (online), Ken Mingis (news)

Director of Blogs
Joyce Carpenter

Art Director
April Montgomery

Technologies Editor
Johanna Ambrosio

Features Editors
Valerie Potter, Ellen Fanning (special reports),
Barbara Krasnoff (reviews)

News Editors
Mike Bucken, Marian Prokop

Senior Editor
Mike Barton

National Correspondents
Julia King, Robert L. Mitchell

Reporters
Sharon Gaudin, Matt Hamblen,
Gregg Keizer, Lucas Mearian,
Patrick Thibodeau, Jaikumar Vijayan

Assistant Managing Editor
Bob Rawson (production)

Editorial Project Manager
Mari Keefe

Associate Editor, Community
Ken Gagné

Office Manager
Linda Gorgone

Contributing Editors
Jamie Eckle, Preston Gralla, Tracy Mayor

■ CONTACTS

Phone numbers, e-mail addresses and reporters' beats are available online at *Computerworld.com* (see Contacts link at the bottom of the home page).

Letters to the Editor
Send to letters@computerworld.com. Include an address and phone number for immediate verification. Letters will be edited for brevity and clarity.

News tips newstips@computerworld.com

Subscriptions and back issues
(888) 559-7327, cw@omeda.com

Reprints/permissions
The YGS Group, (800) 501-9571, ext. 180,
computerworld@theygsgroup.com

■ ONLINE CHATTER

RESPONSE TO:

Talk to the Suits: How To Sell IT Outside of IT

April 12, 2010

Mary K. Pratt's article is not lost on me at all! I have been the victim of many an IT presentation with 10-point bulleted lists. Unfortunately, most of IT suffers from the inability to not talk technobabble. When we use it with the business people, their eyes gloss over and roll back into their collective skulls.

We need to step up our presentation game and speak the same language that the rest of the C levels do. Otherwise, we will continue to suffer at our own hands.

■ Submitted by: *Brian*

RESPONSE TO:

How Security Pros Monitor Their Kids

April 12, 2010

Clueless people like the security consultant quoted in the article don't seem to have put much thought into this. What type of relationship does he think a parent should have with a child? Parental, or BFF? Monitoring a child just means you can see what the child does and discuss it. He says, "If kids don't learn how to live on the Internet when they are at home when they are safe, they are never going to learn it, or they will learn it the hard way when they go out on their own." How are they safe if no parent monitors what they do at home — they might as well be "out on their own" back in their bedroom. I suppose he lets the kids play in the road, so they won't have to learn to deal with traffic when they leave home.

■ Submitted by: *Anonymous*

RESPONSE TO:

Rent-to-Own Hiring Guidelines

April 19, 2010

I would think a consultant would know better than to step on the legal landmine of referring to "permanent employees." We all know that there is no such thing.

■ Submitted by: *MainFrameGuy*

JOIN THE CHATTER! *You, too, can comment directly on our stories, at* **computerworld.com.**

COMPUTERWORLD.COM

Find these stories at computerworld.com/more

Gmail vs. Exchange

Corporate E-mail In the Cloud

Enterprise Exchange users are checking out the business version of Gmail. A few have jumped ship. But some have held back – and at least one has switched back to Exchange.
computerworld.com/s/article/9176036

That Cup of Coffee Could Cost a Lot More Than $1.50

Workers put their companies' data at risk whenever they use Wi-Fi hot spots. Here's how some IT shops are dealing with the problem.
computerworld.com/s/article/9175780

Can an iPad Replace a Laptop on the Road?

Writer Mitch Wagner tries to use an iPad as his only computer during a five-day business trip. Is Apple's tablet up to the job?
computerworld.com/s/article/9176129

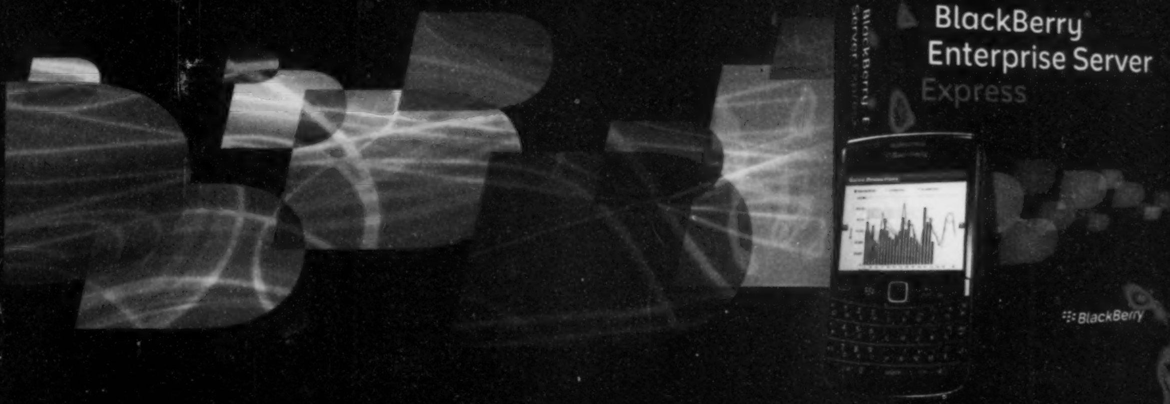
The iPad 3G: Is the Extra $130 Worth It?

The latest version of the iPad delivers 3G connectivity, but there are trade-offs.
computerworld.com/s/article/9176260

The 8 Best iPad Apps – So Far

These tools let you watch streaming movies, manage passwords and more.
computerworld.com/s/article/9175047

Security at all costs, at no cost.



Introducing BlackBerry® Enterprise Server Express

The power behind the world-class BlackBerry experience is now free. That means you no longer have to sacrifice security and manageability when providing mobile solutions across the organization. So go ahead, implement away! Because now you can give proven and secure tools—like full email and calendar sync, and core business apps—to more employees without additional software and licensing costs.

- Give your people on-the-go access to their most critical files
- Even connect employee-owned devices
- All with industry-leading security and manageability

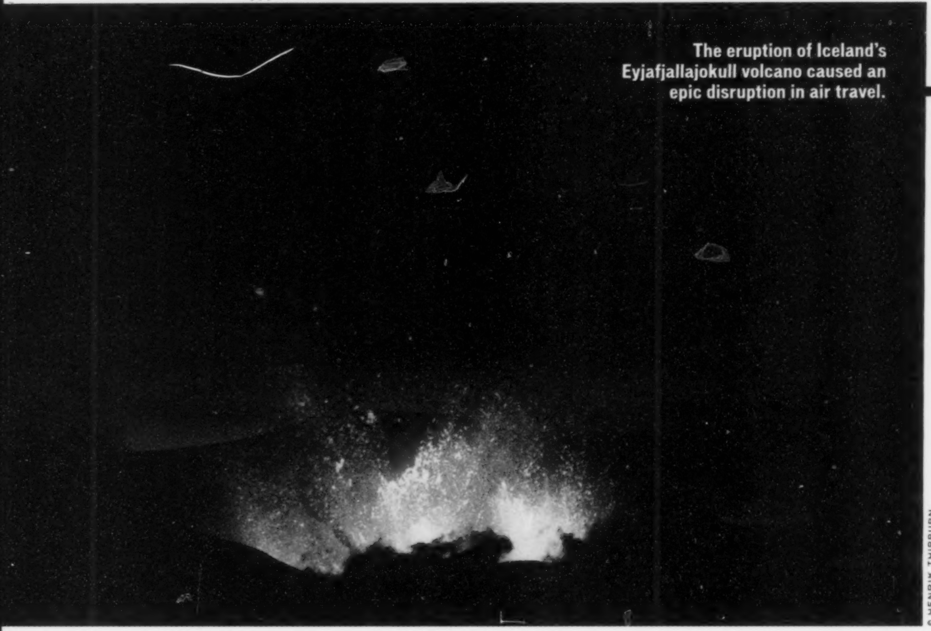
Download now or find out more at
www.blackberry.com/GoExpress

BlackBerry

© 2010 Research In Motion Limited. All rights reserved. BlackBerry®, RIM®, Research In Motion®, SureType®, SurePress™ and related trademarks, names, and logos are the property of Research In Motion Limited and are registered and/or used in the U.S. and countries around the world. All other trademarks are the property of their respective owners. Screen image simulated. BlackBerry smartphone and network services not included.

Fresh Insights
New Trends
Great Ideas

HeadsUp


The eruption of Iceland's Eyjafjallajokull volcano caused an epic disruption in air travel.

© HENRIK THIRBURN

BUSINESS CONTINUITY

IT Planners' New Headache: Volcanoes

YOUR BUSINESS continuity plan covers fires, earthquakes, hurricanes and maybe pandemics. But how about volcanoes?

It's time to update your crisis management plan, according to a Gartner Inc. report, since the ash cloud from the eruption of Iceland's Eyjafjallajokull volcano caused an epic disruption in air travel and stranded thousands of people last month.

"Take advantage of the publicity surrounding this event . . . to raise internal awareness of your organization's vulnerability to transportation outages," the Gartner report said, noting that for the past 2,000 years, the larger Katla volcano has always erupted after Eyjafjallajokull.

The first priority is to help stranded employees find alternate transportation, accommodations and workspaces, the report said. And that requires a central system that tracks which employees are in transit.

Companies also need to figure out how critical work will get done when employees are out. Gartner suggested that a business process management system would help: "It could tell you what work is in progress, what the status is, and who was supposed to do it."

Technologies such as Skype, mobile devices and Web interfaces to company systems could make it easier for stranded employees to get work done. Telepresence rooms aren't widely available, but it might be possible for an employee to find a videoconference room that can be rented by the hour, the report noted.

– Mitch Betts

GET BREAKING NEWS AT
COMPUTERWORLD.COM

GREEN IT

EPA Drafting Energy Standard For Storage Gear

The U.S. Environmental Protection Agency is seeking comments on draft standards that will lead to Energy Star certification for enterprise storage systems, perhaps by the end of this year.

The EPA, which released Draft 1.0 of the standard on April 9, is holding meetings with the storage industry and seeking written comments by May 21.

The agency has developed Energy Star ratings for servers, but storage gear requires a different approach. For example, storage systems almost always have dual power supplies, whereas servers often don't. If the sole power supply on a server were to fail, its work could be shifted to another server. But if the same happened on a storage device, applications would lose access to the data on that platform until it came back up, said Erik Riedel, a member of the Storage Networking Industry Association Technical Council.

The EPA needed time to learn about those differences, said Riedel. Now it's mapping out a complex taxonomy of different types of storage systems based on size, performance and design, he said, and developing specific energy consumption requirements for Energy Star certification for each type.

– STEPHEN LAWSON, IDG NEWS SERVICE

Finally, an antivirus solution that rocks

ESET
NOD32
Antivirus 4
Business Edition

Protecting computers is no longer just about keeping them safe from infiltration by viruses. Loss or corruption of confidential data or sensitive client information via trojans or spyware can spell disaster for any business.

Our award-winning ESET NOD32® Antivirus provides your computers with advanced protection utilizing our intelligent ThreatSense® technology. Engineered to disarm threats before they strike, it maintains high performance levels with low system resource consumption.

With management tools that scale to support large or small business networks, ESET NOD32 Antivirus gives you security that will have your IT department applauding.

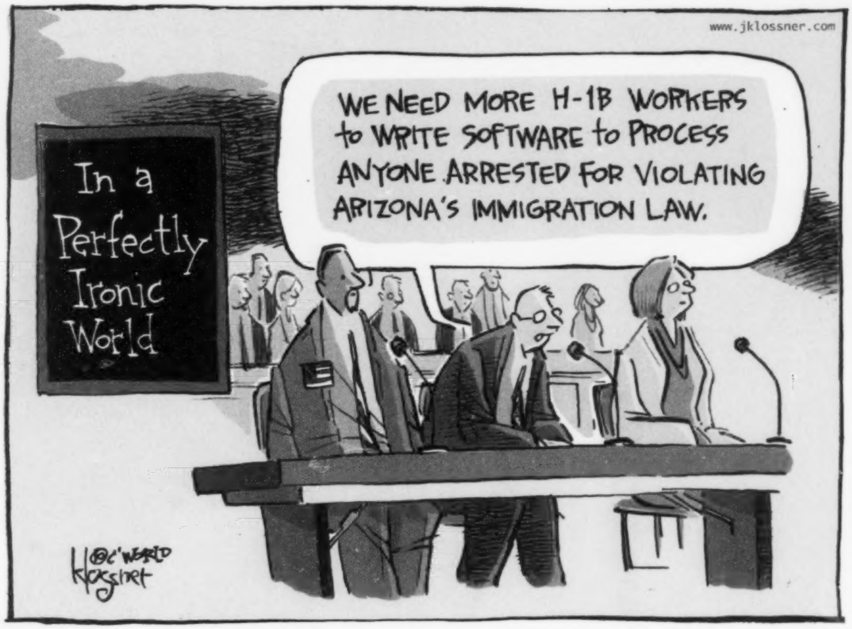
Visit **www.eset.com/business_trial** to evaluate free for 30 days.

eset
Internet Security

© 2010 ESET, LLC. All rights reserved. Trademarks used herein are trademarks or registered trademarks of ESET, LLC. All other names and brands are registered trademarks of their respective companies.

BETWEEN THE LINES

By John Klossner


www.jklossner.com
WE NEED MORE H-1B WORKERS to WRITE SOFTWARE to PROCESS ANYONE ARRESTED FOR VIOLATING ARIZONA'S IMMIGRATION LAW.
In a Perfectly Ironic World
©C'WORLD Klossner

FUTURE WATCH

Purdue CIO Plans for the Post-PC Era

WHEN Gerry McCartney, the CIO at Purdue University, looks around his West Lafayette, Ind., campus, he doesn't see a future for the desktop PC.

He sees a multitude of mobile devices and a university wireless network that is used by 30,000 people per month.

Simply put, mobility rules.

McCartney doesn't know what devices will dominate his campus in the years ahead — perhaps tablet computers, netbooks or some unknown device incubating in a lab somewhere. But there is one thing he does know about the future: It's time to get rid of desktop PCs.

"This idea that I have to go to a PC and sit down and use it is as quaint as having to go to a phone to use a phone," said McCartney, referring to land-line telephones.

Purdue faces the same problem confronting just about every other university in the U.S.: declining financial support. And a major cost at the school is the technical support needed for more than 20,000 PCs.

In a report issued last month, the university outlined a goal to cut recurring IT costs by $15 million over the next three years. Purdue now spends $100 million annually on IT.

With savings in mind, the school's central IT department has already implemented server virtualization, and it plans to move to a virtualized desktop infrastructure, replacing desktop PCs with centrally managed systems that deliver applications from servers.

"We have to fundamentally change the way we are doing business in IT," said McCartney.

The university also plans to consolidate data centers. It has 65 data centers — which it defines as any place that has extra power and cooling to support IT equipment — and wants to cut that number in half. Doing so should lead to substantial hardware and power savings.

– Patrick Thibodeau

Micro Burst

PRIVACY MONITOR

In a global survey of 5,512 businesses,

58%

of the respondents said they have lost sensitive personal information.

SOURCE: ACCENTURE PLC AND PONEMON INSTITUTE LLC, APRIL 2010

DATA CENTERS

This Server Outlasts Two Presidents

Stratus Technologies Inc. – the fault-tolerant server maker formerly known as Stratus Computer – celebrated its 30th anniversary this month. To mark the milestone, the company held a contest to identify the Stratus servers that have been humming away the longest, and those with the least unplanned downtime.

The winner for longevity was a Stratus server at Double Eagle Steel Coating Co. that has been running ERP applications for 17 years. It was installed in 1993, the year Bill Clinton was first sworn in as U.S. president. "Around Y2K, we thought it might be time to update the hardware, but we just didn't get around to it," said IT engineer Phil Hogan, in a statement.

Insurer Highmark Inc. took the uptime title with a Stratus server that has operated with no unplanned downtime since February 2001 – and hasn't even been rebooted in more than four years. Highmark's server processed 170 million electronic claims submissions from doctors and hospitals last year.

– MITCH BETTS

Redefining X.

When an organization needs more computing power for today's memory-intensive workloads, the conventional wisdom is to buy more servers. This can lead to massive inefficiency and server sprawl, with the majority of servers today running at only 10% utilization[1]. As the computational demands of a smarter planet continue to explode, this sort of inefficiency has become a problem—a problem IBM engineers have now solved. The 5th generation of Enterprise X-Architecture® from IBM featuring the Intel® Xeon® Processor 7500 Series lets you add memory independently of the processor. As a result, IBM eX5 systems can leverage 6x more memory than current x86 servers, reduce storage costs by up to 97% and cut licensing fees by 50%[2].

A smarter business needs smarter software, systems and services.
Let's build a smarter planet. ibm.com/systems/ex5

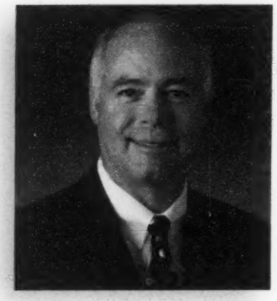
IBM®

intel
Xeon
inside

Powerful.
Intelligent.

1. McKinsey study: http://www.datacenterknowledge.com/archives/2009/04/15/mckinsey-data-centers-cheaper-than-cloud/. 2. Comparison of IBM System x3850 X5 + MAX5 with total 96 DIMMs x 16 GB for total 1.5 TB of memory vs. IBM System x3850 M2 with 32 DIMMs x 8 GB = 256 GB. Comparison of processor-based licensing fees on current Generation 4 processor systems with 64 DIMMs vs. the IBM System x3690 + MAX5. IBM eXFlash technology would eliminate the need for a client to purchase two entry-level servers and 80 JBODs to support a 240,000 IOPs database environment, saving up to 97% in server and storage acquisition costs. IBM, the IBM logo, ibm.com, X-Architecture, Smarter Planet and the planet icon are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. A current list of IBM trademarks is available on the Web at www.ibm.com/legal/copytrade.shtml. Intel, the Intel logo, Xeon and Xeon Inside are trademarks or registered trademarks of Intel Corporation in the United States and other countries. © International Business Machines Corporation 2010.

CUSTOMER VIEWPOINT



Peter Graves
CIO, INDEPENDENT BANK

Peter Graves is CIO of Independent Bank, an Ionia, Mich.-based financial institution with approximately $3 billion in assets and over 100 offices. Under his leadership, Independent Bank has used server, application, and desktop virtualization to build a radically streamlined infrastructure that's cheaper to run and easier to change. Here he shares his thoughts on improving IT efficiency.

Ben Kohn
SR. SYSTEMS ARCHITECT,
INDEPENDENT BANK

Tom McKowen
IT ENTERPRISE ARCHITECT,
INDEPENDENT BANK

FOR MORE INFORMATION: please visit www.virtualizationvision.com/cw

BLOG: http://twitter.com/citrixblogs

TWITTER: citrix.com/twitter

COMPUTERWORLD
Custom Solutions Group

CITRIX®

Investing in Efficiency with Virtualization

Need to do more with less? Virtualize your infrastructure.

What are the benefits of simplifying an IT infrastructure?

Well, I wouldn't say companies like ours that embrace virtualization have simplified their infrastructures necessarily. In some ways, we've made it more complex. But from that complexity have come opportunities that enable us to do things that weren't possible before. For instance, we've shrunk our hardware profile, so we have fewer servers to maintain. We can add new applications quickly, so our flexibility to meet business needs is greater. We're locking down our network in ways that allow for tighter security. And all of that helps us reduce costs and increase efficiency. So even though the systems and the way things interrelate are arguably more complex now, we're able to more easily deliver functionality to our end users.

> "So even though the systems and the way things interrelate are arguably more complex now, we're able to more easily deliver functionality to our end users."

How much emphasis should companies interested in streamlining IT place on being able to add or remove capacity on demand?

It's a big focus area for us within the next 12 months. Ultimately, we'll be able to spin up new servers as needed based on the time of day, the number of people on the network, or the number of people using a particular application. Then we can idle that capacity when it's no longer required. It's a much more robust model that will save us money, because we won't have to maintain excess resources.

Plus, as Ben Kohn, one of our senior architects here, likes to point out being able to add and remove capacity will make us more agile. It takes most companies weeks to respond to rising capacity needs, during which their performance and service levels can suffer. Being able to add capacity on demand will give us an edge on our competitors and with our customers.

What role should providing self-service tools to users play in streamlining IT?

Based on our experience, it's definitely worth pursuing. In the past, 30 to 35 percent of our help desk tickets involved password resets. After we created a self-serve password reset tool that dropped to about 15 percent. We've also created a self-serve portal where users can access a knowledge base, check on the status of their help tickets, and so on, and that's been a big time saver for everyone as well.

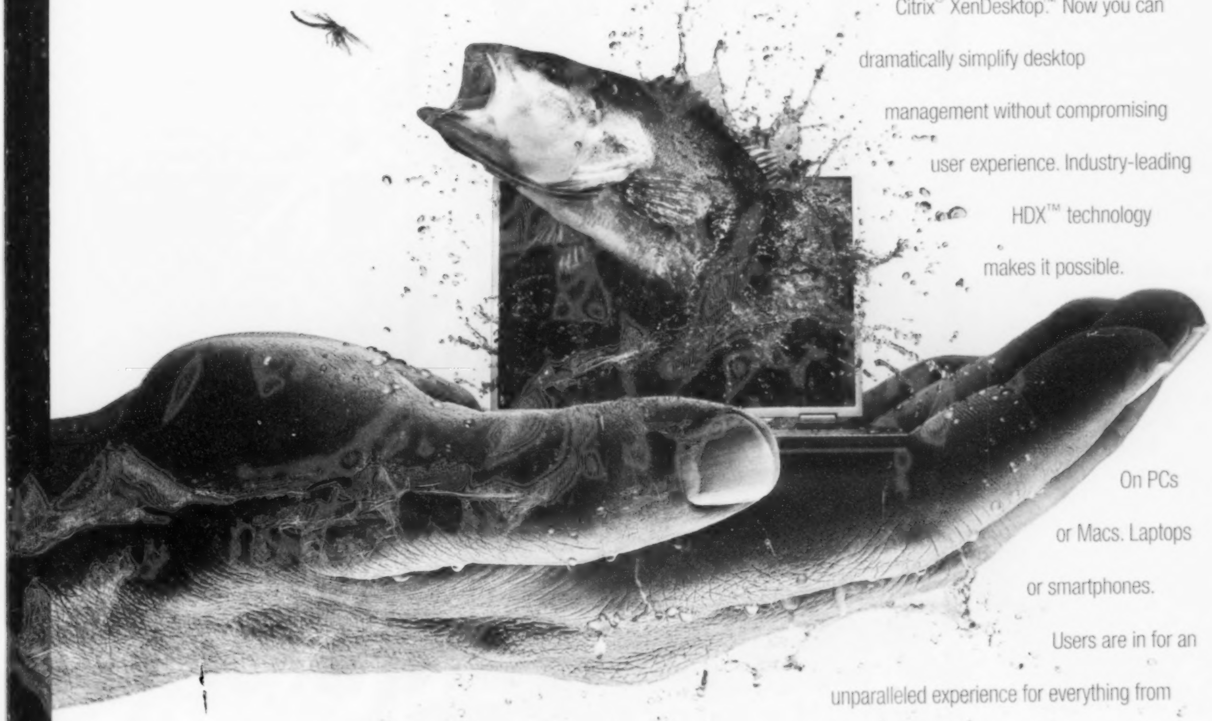
Is a streamlined infrastructure ultimately a nimbler one?

That's really the key issue in all of this; particularly when you're in a competitive environment—and banking can't be any more competitive than it's been these last few years. Tom McKowen, our Enterprise Architect, talks about this a lot. The infrastructure we've built enables us to move faster, so when executive management approaches us with a new idea we can make those changes and take the company in new directions quickly. That flexibility and agility are crucial benefits, and outcome of the infrastructure we have today.

SIMPLICITY IS POWER

The power of high-def desktops.

It's more than a desktop. It's an immersive experience. Deliver a vibrant, personalized, high-definition desktop to any device, across any network, with Citrix® XenDesktop.™ Now you can dramatically simplify desktop management without compromising user experience. Industry-leading HDX™ technology makes it possible.



On PCs or Macs. Laptops or smartphones. Users are in for an unparalleled experience for everything from applications to rich media. That's the power of desktop virtualization at work. And everywhere else, too.

Simplicity is power. Citrix.

CITRIX®

Citrix.com/SimplicityIsPower

© 2010 Citrix Systems, Inc. All rights reserved. Simplicity is Power and its stylized treatment, XenDesktop and HDX technology are trademarks of Citrix Systems, Inc.

HP Faces Rocky Road With Palm Buy

Analysts offer little hope that the $1.2B deal will make HP a major smartphone player.

By Matt Hamblen and Nancy Gohring

ANALYSTS SAY it's no sure bet that Hewlett-Packard Co.'s planned $1.2 billion purchase of Palm Inc. will prove successful. In fact, an IDC research note gives it only a one in four chance of working out.

At the close of the deal, expected by July 31, HP will gain a struggling smartphone business and the means to create a tablet to take on Apple Inc.'s iPad, though such a project would take at least a year.

"HP needs a strong presence in mobile, but Palm doesn't deliver that," said Charles Golvin, an analyst at Forrester Research Inc.

Golvin said HP would have been better off — and spent a lot less — by simply trying to hire away Palm's top engineers. By acquiring the company, HP gets the Palm brand and its intellectual property, neither of which it needs, he said.

And, Golvin added, Palm's WebOS mobile operating system is probably not "viable in the long term in the face of competition."

Analysts also cited the smartphone makers's lack of success in Europe, and the dearth of WebOS applications — fewer than 4,000 apps have been developed for Palm's operating system, while 150,000-plus iPhone apps are now available through Apple's App Store.

Gartner Inc. estimates Palm's share of the U.S. smartphone market to be 4.3% and its European share a barely visible 0.2%.

Nonetheless, the combined company will have to quickly find ways to better compete worldwide against handhelds running Google Inc.'s increasingly popular Android mobile operating system, market leader Nokia Corp.'s top-selling Symbian-based devices and the iPhone.

After announcing late last month that the deal had been struck, HP executives said the company will quickly increase Palm's $190 million research and development budget while funding new sales and marketing activities.

"We intend to invest heavily in product development and go-to-market capabilities to drive this market," said Todd Bradley, vice president of HP's personal systems group and a former Palm CEO.

Steve Hilton, an analyst at Analysys Mason, suggested that HP should build WebOS-based smartphones for corporate users. HP could "dislodge RIM and Nokia" by taking advantage of its powerful corporate sales and marketing organization, he said.

Bradley noted that HP is also looking to use Palm's technology in its effort to make inroads in the fledgling tablet computer market. WebOS currently runs only on mobile phones. "We see opportunities beyond smartphones," said Bradley. IDC estimates that about 7.6 million tablets will be sold this year and that sales will reach 50 million by 2014.

Analyst Jack Gold at J.Gold Associates LLC said a strong tablet offering could significantly boost HP's revenue. "Since tablets are primarily front ends to the Internet, it allows HP to deploy many cloud-based services from which it can generate revenue," he said.

Like other HP acquisitions overseen by CEO Mark Hurd, the integration of Palm will likely involve a lot of operational oversight, said Charles King, an analyst at Pund-IT Research. People in Palm's marketing and sales groups will probably lose their jobs, but the engineering talent will likely be highly valued, he said.

Judging from the way HP handled its acquisitions of Electronic Data Systems and 3Com, King said, "I believe they will keep the folks on board who understand the product, and they'll maintain the brand."

Palm is best known for creating the PDA market with the iconic PalmPilot, which came out in 1996. The company lost its footing when the PDA business stalled and it was slow to move to smartphones.

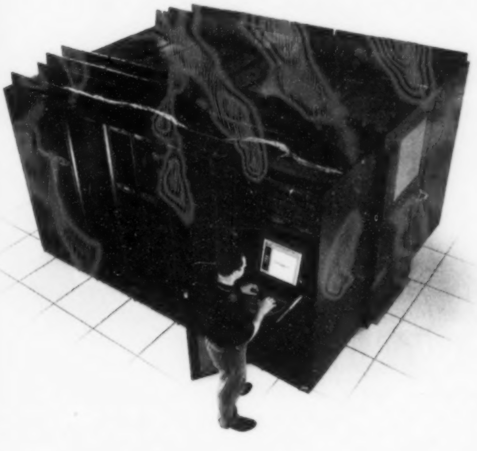
Palm CEO Jon Rubinstein, best known for his role in developing Apple's iPod, will stay with the company. ■

Gohring *is a reporter for the IDG News Service.* **Agam Shah** *and* **James Niccolai** *of the IDG News Service contributed to this story.*

Almost $90 million in server room research. Now yours is FREE!

Implementing Energy Efficient Data Centers
An Improved Architecture for High-Efficiency, High-Density Data Centers
The Advantages of Row and Rack-Oriented Cooling Architectures for Data Centers
Deploying High-Density Zones in a Low-Density Data Center
Power and Cooling Capacity Management for Data Centers
White Paper #150
APC

"Implementing Energy Efficient Data Centers"	"An Improved Architecture for High-Efficiency, High-Density Data Centers"	"The Advantages of Row and Rack-Oriented Cooling Architectures for Data Centers"	"Deploying High-Density Zones in a Low-Density Data Center"	"Power and Cooling Capacity Management for Data Centers"
White Paper #114	White Paper #126	White Paper #130	White Paper #134	White Paper #150
~~$65.00~~ FREE!	~~$120.00~~ FREE!	~~$85.00~~ FREE!	~~$115.00~~ FREE!	~~$225.00~~ FREE!



Download FREE APC White Papers to avoid the most common mistakes in planning IT power and cooling.

Have a plan for your data center.
We talked to thousands of customers from Baltimore to Beijing and saw the good, the bad, and the ugly measures customers took in their data center planning. In many cases, turnover and budget cuts resulted in no plan at all.

Get the answers you need and avoid headaches tomorrow.
Do you and your staff know the top ten planning mistakes to avoid? The easiest way to improve cooling without spending a dime? Find these answers and more in our latest selection of white papers. Take advantage of our valuable research today and save yourself money and headaches tomorrow.

If you would like more information about APC's availability solutions, visit us online at *www.apc.com*

Time well spent... Choose and download any three white papers within the next 90 days for **FREE!**

Visit www.apc.com/promo Key Code s149w • Call 888-289-APCC x6169 • Fax 401-788-2797

APC by Schneider Electric

©2010 Schneider Electric Industries SAS, All Rights Reserved. Schneider Electric and APC are owned by Schneider Electric, or its affiliated companies in the United States and other countries.
e-mail: esupport@apc.com • 132 Fairgrounds Road, West Kingston, RI 02892 USA • 998-1764

Faulty McAfee Update Burns IT Execs

The security firm moves quickly to placate companies crippled by its flawed antivirus software. **By Gregg Keizer and Robert McMillan**

McAFEE INC. moved swiftly to make amends to corporate and individual customers whose PCs were crippled late last month by a faulty antivirus update that it distributed.

Less than a week after the security vendor had pushed the flawed update to users, it offered affected business customers a free one-year subscription to its automated security assessment service, and reimbursement to consumers for any "reasonable expenses" related to the incident.

The faulty update, released on April 21, had corporate IT administrators scrambling when the new signatures quarantined a critical Windows system file, causing some computers running Windows XP Service Pack 3 to crash and reboot repeatedly.

McAfee said later that a small fraction of its corporate customers — less than 0.5% — were affected by the glitch. But those that were faced a time-consuming repair process. Virtually all of the affected PCs were unable to connect to a network, so corporate support personnel had to manually fix each machine impaired by the faulty update.

An Intel Corp. spokesman said an unknown number of the chip maker's systems were knocked offline by the bad update. He said the resulting problems had a "significant" impact on the company.

"There were quite a few clients, laptops and PCs [affected]," the spokesman said. "We were able to get it stopped fairly early on, but clearly not soon enough."

About 40% of machines used by the government of Washington's Snohomish County were affected by the problem, according to John Storbeck, the county's engineering services supervisor. In an e-mail, he called the incident "a nightmare."

In Iowa, a disaster response exercise was disrupted when the update caused 9-1-1 computer systems to crash, said Deb Hale, a security administrator at Long Lines, an Internet service provider in Sioux City. "Thanks to McAfee, we were forced to test our response to a disaster while in the midst of a real 'disaster,' " she wrote in a blog post on the SANS Institute's Internet Storm Center site.

> **"You're not talking about some obscure file from a random third party; you're talking about a critical Windows file. The fact that it wasn't found is extremely troubling.**
>
> **AMRIT WILLIAMS,**
> CTO, BIGFIX INC.

"This is the worst glitch that I've ever had to deal with," said Ken Whittaker, a desktop support technician at a Michigan university where some 10,000 desktops were affected by the defect. He asked that the school not be identified.

It's not unheard of for antivirus vendors to mistakenly impair software with their updates. Criminals have become so good at switching up their code that companies like McAfee must now churn out millions of signatures in a cat-and-mouse game to identify malware that is in circulation. That leads to errors.

Still, the fact that McAfee allowed a major Windows component to be misidentified demonstrates "a failure in their quality control process," said Amrit Williams, chief technology officer at systems management software vendor BigFix Inc.

"You're not talking about some obscure file from a random third party; you're talking about a critical Windows file," said Williams, a former director of engineering at McAfee. "The fact that it wasn't found is extremely troubling." ■

McMillan *is a reporter for the IDG News Service.*

While you were out...

If you miss a call, you miss an opportunity. With Sprint Mobile Integration and Global MPLS, you'll have one number, one voicemail and one easy way to control mobile usage. Simplify the way your company stays in touch. Make it easier for clients to reach you. And reduce company telecom expenses. Less dialing, happier clients. Start closing. 1-866-653-1056 sprint.com/convergence

Sprint

The Now Network™

LISA GORDON
718-926-9936
MULLIN
-0968
5 times
ROB SMITH
415-577-2631
→Called @ 1:30pm
TENA Gru
415
→Nee
ASAP
JOHN PARK
415-725-8045
→Called @ 10:15am
SARAH LARSEN
610-555-0100
→Call back before 3
BlackBerry
7:00
Sprint

nemertes research PilotHouse Award

IT professionals name Sprint best provider of MPLS—delivering best value, customer service, technology and network reliability.

Coverage not available everywhere. The 3G Sprint Mobile Broadband Network (including data roaming) reaches over 269 million people. The Nationwide Sprint and Nextel National Networks reach over 275 and 274 million people, respectively. Other restrictions apply. See store or sprint.com for details. ©2010 Sprint. Sprint and the logo are trademarks of Sprint. Other marks are the property of their respective owners.

FOCUS on driving

THE GRILL

Padmasree Warrior

The network is still the glue, but Cisco's chief technology officer says **video now drives** a lot of the switch and router giant's **strategic decisions.**

Dossier

Name: **Padmasree Warrior**

Title: **Chief technology officer**

Organization: **Cisco Systems Inc.**

Location: **San Jose**

Something people don't know about her: **"I am an artist and a sculptor."**

Biggest vice: **Twitter :-)**

Favorite hobbies or pastimes: **Theater and haiku**

Favorite book: ***The Alchemist: A Fable About Following Your Dream*, by Paulo Coelho**

Favorite movie: **The *Lord of the Rings* series**

Padmasree Warrior, chief technology officer at Cisco Systems Inc., joined the tech giant in 2007 after 23 years at Motorola Inc., where she held a number of positions, including CTO. An advocate for women and minorities in engineering fields, Warrior was inducted into the Women in Technology International Hall of Fame in 2007. No stranger to social media, Warrior has 1.4 million Twitter followers. And while her company might be better known for providing routing and switching gear for the largest organizations on the planet, Cisco has also invested in technologies that fit in your pocket, including the popular Flip line of video cameras. Warrior talked about Cisco's strategy, and why the company is betting on video.

Cisco seems to have gone well beyond a traditional routing and switching company to all kinds of collaboration. What's your vision for the Internet? The Internet is moving from a superhighway to becoming a platform that touches every aspect of our lives, with roles in health care, energy and city services. Our vision at Cisco is to enable the "next Internet." It can't be just about data transport, but enabling media experiences. The Internet also is no longer just about messaging, but collaboration. Facebook, Twitter and blogs that are popularized in the consumer world are coming to the business world. We

Continued on page 16

Microsoft

WITH MICROSOFT VIRTUALIZATION, WE
SAVED 90%
IN ENERGY USAGE
BY REPLACING PHYSICAL SERVERS
WITH VIRTUAL ONES

Principal Technical Architect
Chris Steffen
Kroll Factual Data

ON: Being more Efficient

To read the full case study, visit itseverybodysbusiness.com/virtual

To download the case study, snap this tag or text VIRTUAL to 21710*

Get the free app for your phone at **http://gettag.mobi**

*Standard messaging and data charges apply.

“What Google is doing with fiber-optic broadband is not something we’d consider contradictory to Cisco. Anything that drives bandwidth is good for us.

Continued from page 14

have to create space for apps that integrate voice, video and data into a single platform. We’ve launched a product now being called Quad doing just that.

So collaboration of various kinds is the second pillar, after enabling media experiences, with a third pillar devoted to sustainability, which means power consumption, cooling costs and processing power. [That] leads us to think in terms of smart cities, smart buildings, green IT and energy efficiency. Virtualized infrastructure and cloud computing is the fourth pillar. So we have media experiences, collaboration, sustainability and virtualized infrastructure as the four pillars of our Internet vision.

What is Cisco’s position in all that? Clearly, video is a killer app, and a sweet spot for us — making video easy to capture, with multipoint connections and all kinds of apps.

Tell me more about Quad. Quad is a product launched in November in alpha for enterprise collaboration. The name Quad comes from college quads, those places you found in college where people interacted.

It became a question of how to create that experience virtually. Basically, Quad is an enterprise-class platform to integrate conferencing and unified communications and voice, video and social networking concepts into the enterprise space. So in that way, social networking translates into expert networking for business users. We already have WebEx collaboration on the iPhone and iPad and have announced BlackBerry support.

Cisco announced a pocket-size Flip video camera called Slide HD. Why is the company going in that direction? The lines are blurring between the consumer and enterprise worlds. People want to bring the devices they have into the work environment. Flip continues to lead in the pocket video camera space, and we want to keep making compelling devices to use. People use Flip for enabling video blogging, and I use it to blog short messages with my work community.

What have you learned from your experience with video blogging? Video is as close to a synchronous and immersive communication as you get to real life. But I also realize that e-mail might be more appropriate at other times. I collaborate all kinds of ways, from 140 characters to video blogging.

Does Cisco plan to add radios to the Flip devices, making them almost like smartphones? We are interested in the various forms of video and what will add value to video. That’s our central strategy, so anything we do to strengthen that is important. Perhaps we’ll add Wi-Fi capability to make Flip much more powerful.

Cisco has moved pretty far beyond the data center and the basic business of routing and switching. The newer technologies we look at all drive our core business. Video drives core things, including how we make software and routing to process video. It drives bandwidth. The network also plays a key role for how you combine security and policies for cloud computing. Everything I’ve described in the “next Internet” all ties back into the core of the network. The network is more or less the glue that brings everything together.

Cisco has been quiet lately regarding optical network transport. How would it take advantage of Google’s big play for fiber-optic networks to bring high-speed Internet to homes and businesses? We’ll align our star with what the service providers align with. What Google is doing with fiber-optic broadband is not something we’d consider contradictory to Cisco. Anything that drives bandwidth is good for us. Our approach is neutral.

When you meet customers, what are they asking for? I met 15 customers in Washington recently, and every single one was looking for collaboration and security. Small and large companies in the last five years have had distributed resources with sales and engineering teams all over, so it’s a question of how to bring that expertise together. That’s the reason collaboration is extremely important. But they are also looking at data center consolidation, virtualization, and many have reduced budgets. Green IT is also top of mind.

What does Cisco need to do better? We need to think of the networks as a way to create apps and to think of the user experience, including keeping things simple. Apple is good at user simplicity and [is] absolutely the benchmark for that.

— Interview by **Matt Hamblen**

YOUR
SUPPORT
TEAM'S
SILVER BULLET.

QUICK ON
THE DRAW
AND
QUICK TO
SOLVE!

A legendary support team is already in your office — they just need the right tool. GoToAssist connects your team with your customers like never before with simple, powerful remote support.

GoToAssist®
EXPRESS™

by CiTRIX®

Try It FREE for 30 Days
gotoassist.com/computer

Hidden Snags IN OPEN SOURCE

Tight budgets are prompting another look at open source. Users say cost savings and other benefits are easy to reel in, but there are hitches, too.

BY MARY BRANDEL

HEN CIO Daniel Chan was first prompted to use open-source software, cost savings weren't top of mind. He was mainly interested in how open source would enable his IT group at the New York State Office of Temporary and Disability Assistance to put ideas into action more quickly. In his government office, the procurement process lasts anywhere from 12 to 18 months. "It makes it impossible to do anything creative," Chan says.

With open-source software, it took just a few months for Chan's team to get the tools it needed to build a new self-service benefits system — just in time for the flurry of activity that occurred during the economic freefall. Even though the agency purchased a support contract for the technology, there were no licensing terms and conditions to negotiate, which cut way back on the involvement of the procurement and legal offices.

And the benefits kept coming. As use of the system escalated, Chan's team not only kept up with the increasing volume, but also was able to help transfer the technology to three other states in a month's time, since there was no commercial license involved. "We were able to get people to come in and help quickly because there was a large pool of developers to draw from," Chan says.

With that success, Chan is now looking at migrating from the agency's current Unix platform to Linux — and this time, cost savings are at the fore. "We'll easily see three to five times in savings by moving to open systems," he says. "Instead of $5 million to do a technology refresh, it will be $1 million or less."

In fact, in an exclusive *Computerworld* survey of 143 IT professionals, 80% of the respondents cited cost savings as the No. 1 benefit of open-source software, and 61% said open source has become more accepted in enterprises over the past few years (see charts on following pages). Open-source software "has transformed over the last decade from this unknown, risky thing that hippies and garage developers do, to the basis for a market in the billions of dollars," says Jay Lyman, an analyst at The 451 Group. "It's come of age, and it's just assumed to deliver cost savings."

But the close association of open source and cost savings can lead users to

overlook other benefits of open source — and the challenges that might come with it, including the need to manage cultural change, risk and expectations.

"There's a lot to live up to," Lyman says. "If people discover that it costs more than they thought, you do hear horror stories." What's more, the decision to use open source has — until recently — been more low-level than strategic, according to Forrester Research Inc. So while there's executive awareness of the cost advantages, other benefits, potential risks and structural changes required to take full advantage of open source are less well understood.

NOT ALWAYS 'OPEN'

One of the reasons why costs can be higher than expected is because companies often opt to purchase a license for the software rather than using the free-of-charge community version. Some vendors operate on a "dual-license" business model, in which customers can buy a license to get access to the vendor's support team or to extra features and extensions for the core software, such as management tools.

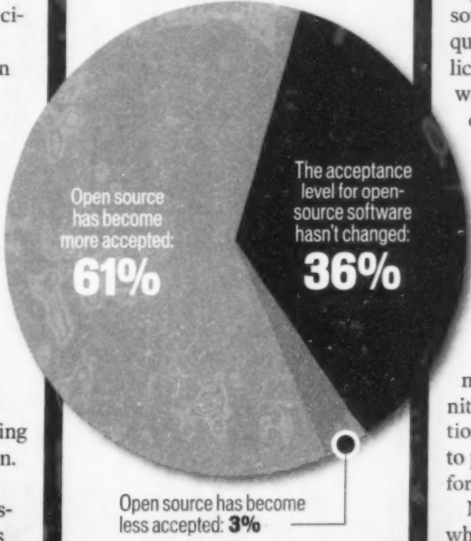
According to Mark Driver, an analyst at Gartner Inc., the overwhelming majority of commercial open-source efforts today are based on a dual-license model. Customers should know, he says, that with this option, "the open-source-ness of the product comes into question." While open-source software licenses cost less than commercial software licenses, they include terms and conditions that restrict your use and lock you into a vendor. "We're seeing pushback from users who say, 'I went to open source to avoid these commitments,' as well as those who just want a piece of software that works well and is cheap," Driver says.

Lyman points out that larger enterprises often have the development resources to work with community versions of open-source applications, but even they might find reasons to purchase a license, such as a need for service-level agreements.

Not so for NPC International Inc., which operates more than 1,150 Pizza Hut restaurants worldwide. Five years ago, it used very little open-source

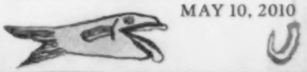
THE 'IN' CROWD

How has the corporate perception of open-source software changed over the past few years?



SOURCE: EXCLUSIVE *COMPUTERWORLD* SURVEY OF 143 IT PROFESSIONALS, APRIL 2010

ILLUSTRATION BY BELLE MELLOR



software, whereas today it tries diligently to avoid commercially licensed software if there's an alternative, says Jon Brisbin, portal webmaster at NPC. The franchisee started migrating to open source when it converted its point-of-sale system from dBase to PostgreSQL; that deployment has grown to 10,000 installations.

On the other hand, says James Sims, CIO at Save Mart Supermarkets, buying an enterprise license from Ingres Corp. was a financially sound decision. Save Mart uses several open-source applications, including PostgreSQL, Apache Lucene, Red Hat Linux, MySQL and Xymon, and it runs its payroll and time-and-attendance systems on an Ingres- and SUSE Linux-based system. It started out using the public domain version of Ingres but experienced challenges that were related to the software's inability to effectively use a database for a company of Save Mart's size. Sims turned to Ingres for support, which led to a contractual agreement. While the costs are comparable to what he'd pay a commercial database company, "we get incredible support — more than they should provide," he says.

Similarly, Bassim Hamadeh, founder of custom educational publishing firm University Readers Inc., purchased a license for SugarCRM three years ago, after using the community version for a couple of years. "Our IT manager read about Sugar 2.0, installed it, and within a week, we were using it," he says. At approximately $350 per user per year, he says the price is 20% to 25% that of a system like Salesforce.com, and it enables the company to use additional features such as a robust reporting tool, a workflow system and automated triggers.

WEB-READY

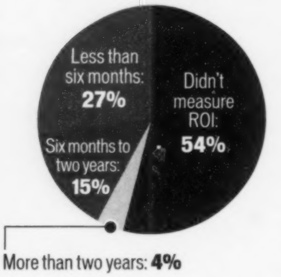
For which applications are you now using open-source software?

Web applications	64%
Databases	55%
Content management	30%
Data center	24%
Customer relationship management	16%
Business intelligence	13%
ERP	5%

SOURCE: EXCLUSIVE *COMPUTERWORLD* SURVEY OF 104 IT PROFESSIONALS, APRIL 2010. RESPONDENTS COULD CHOOSE ALL THAT APPLY.

QUICK RETURN

How long did it take you to achieve ROI with your primary application?



SOURCE: EXCLUSIVE *COMPUTERWORLD* SURVEY OF 104 IT PROFESSIONALS, APRIL 2010

THE BIG GREEN

What do you perceive are the benefits to open-source software adoption?

Lower cost	80%
No license issues	59%
Easier customization	36%
Specialized applications	32%
Ease of adoption	27%
Security	20%

SOURCE: EXCLUSIVE *COMPUTERWORLD* SURVEY OF 143 IT PROFESSIONALS, APRIL 2010. RESPONDENTS COULD CHOOSE ALL THAT APPLY.

SUPPORT COSTS

Another hallmark of open source is the support available in community forums, particularly for the more mature or widely used systems. But choosing to rely on community support instead of signing a service contract can be risky.

"People can Google for 90% of the problems they run into, but the last 10% may be killer if it's a mission-critical system," says Gartner's Driver.

It's important to understand the business impact of a catastrophic failure and have contingency plans in place to remediate the problems, he says. Reducing your risk might mean limiting your use of an application based on its maturity and the level of community support available, or choosing to pay for vendor or third-party support.

"If you have no service-level agreement, contract or warranty, you have shouldered the burden of responsibility," Driver says. "If you're able to do self-support, it's an upside, but if you can't, you have created unforeseen risk."

Of all the open-source software NPC uses, Brisbin opted to pay for support only for SpringSource tc Server, which it uses to deploy Web-based applications in an internal cloud. He went that route because the application server deployment is pushing the envelope of common developer knowledge. "We can't go out to a mailing list of 150 developers and ask questions, because not many people are doing this the way we are," Brisbin says. But he says he's happy that the contract didn't require him to purchase a license, and that it cost just a couple thousand dollars.

APPLYING GOVERNANCE

Organizations serious about using open source are also advised to establish policies and governance practices to monitor and control its use. Driver estimates that only 20% of organizations using open source have such policies in place, and in the *Computerworld* survey, most respondents said they didn't measure ROI (see chart at left). Taking such a risk can lead to unforeseen costs; for instance, even if you think you're reaping benefits, with no benchmarking or cost comparison, that could be an illusion, he says.

"People can be getting a negative ROI and firmly believe it's positive because they've gone from a [capital] expense to an [operating] expense," he says. In other words, the savings on license fees could be outdone by the salaries of employees who must spend eight to 10 hours a week updating, testing and patching the software.

In some cases, companies are realizing savings but can't prove it. "The key to minimizing the potential downside and maximizing the upside is governance," Driver says. "Without that, you're shooting in the dark."

At the New York State Office of Temporary and Disability Assistance, Chan is creating a direct comparison between the cost and performance of the new IT environment and the older one. He cautions that it requires an investment of resources to run tests and create meaningful benchmarks.

And even if you're only planning to use the software internally, it's important to ensure that the legal department

Continued on page 22

.COM FREE FOR ONE YEAR*

NO STRINGS ATTACHED!

1&1® INSTANT DOMAIN PACKAGE:
✓ FREE Private Domain Registration
✓ 1&1 Starter WebsiteBuilder
✓ E-mail Account With 2 GB Mailbox
✓ 24/7 Toll-Free Customer Support

1&1®

MEMBER OF
united internet

Get started today, call 1-877-GO-1AND1 www.1and1.com

*Offer valid as of May 1, 2010 and applies to the Instant Domain Package only. After first year, standard pricing applies. Limit 1 per customer. Visit www.1and1.com for full promotional offer details. Program and pricing specifications and availability subject to change without notice. 1&1 and the 1&1 logo are trademarks of 1&1 Internet AG, all other trademarks are the property of their respective owners. ©2010 1&1 Internet, Inc. All rights reserved.

> **The key to minimizing the potential downside and maximizing the upside [of open-source software] is governance. Without that, you're shooting in the dark.**
>
> **MARK DRIVER,** ANALYST, GARTNER INC.

Continued from page 20

understands the numerous types of licenses available, Driver says. "Restrictions vary, sometimes dramatically," he says. "You don't want to get a letter from your lawyer with an injunction because your open-source solution violated someone else's intellectual property."

Fitting open-source technology into your current infrastructure is another thorny issue. Three years ago, Roy Mentkow, director of technology for the city of Roanoke, Va., decided to transition from Microsoft Office to OpenOffice. However, for some users, desktop applications were heavily integrated with Lotus Notes workflows. "We had to ensure OpenOffice worked well with Notes on an application-by-application basis," Mentkow says. "That was something that snuck up on us."

In the end, the city migrated about half of its 900 users, resulting in $140,000 in savings. Still, Mentkow says, the savings won't come all at once but rather when those desktops would have been upgraded to a new version of Microsoft Office.

It's also important to look beyond another widely touted benefit of open-source software: the ready pool of developers who are familiar with the technology and see the prospect of using it as a retention or hiring plus. While it's true that developers are plentiful and eager to work with open source, that expertise can come at a price.

"If you asked a developer if they'd like to work with open-source or commercial software, eight times out of 10 they'll say open source," Lyman contends. And some developers may charge less than developers who work with commercial products.

Hamadeh says that with SugarCRM, it's even possible to "have a local student come in and program something in a couple of hours," Hamadeh says, or a tech-savvy business person can create custom modules. But, he cautions, while there are some SugarCRM consultants who will do a great job, they can be expensive, so having internal IT talent can help you avoid added costs.

Brisbin points out that the success of open source at NPC is due largely to the fact that its developers have a breadth of knowledge and are willing to work outside of narrowly defined silos.

"We have small development teams, and we cross areas of responsibility," he says, noting that he routinely moves among RPG, Java, Web front-end development, PostgreSQL and the underlying application system. "There is a critical mass of information you need to have as a developer to do open source effectively," Brisbin adds.

And then there's one of the more hard-to-quantify costs: cultural change. Mentkow says Roanoke's move to OpenOffice involved changing the culture as much as it did changing the desktops. "Cultural change does not happen in moments," he says. "As we move to different platforms and different standards, what we have to see is an acceptance of those changes."

Sims adds that it's easier to achieve cultural change at organizations that value resourcefulness and courage, since moving to open source represents a break from the approach that involves seeking traditional answers to difficult problems. "People still say you can't get fired for buying Microsoft or Oracle — how about, you *should* get fired for not coming up with the best scenario that meets your company's unique criteria, regardless of conventional wisdom," he says.

As open source matures, companies will begin to get past the misconceptions, understand the implications and balance the benefits with the downsides. "Most of the time when there's a problem, it's because there's an assumption of 'It works, and when it doesn't, we'll fix it ourselves or find the answer on the Internet,' " Driver says. "Or there's an assumption that the cost of acquisition can be extrapolated to total cost of ownership. But there's a care and feeding cost to everything." ■

Brandel *is a* Computerworld *contributing writer. Contact her at marybrandel@verizon.net.*

ADAPTABLE OPEN SOURCE

Cost savings are still the primary driver for organizations choosing open-source software, according to Jay Lyman, an analyst at The 451 Group. However, that impression seems to change after adoption, when more users report that flexibility is the primary benefit they enjoy rather than cost savings, he says.

"With the downspin of the economy, how you spend your money is critically important," says Bassim Hamadeh, founder of University Readers, which uses SugarCRM software. "But beyond saving money, what we look for is better software." SugarCRM offers enough flexibility that when the IT team wants to add a feature to the Web site, it first considers creating it in SugarCRM.

"It's not a closed-circuit environment," Hamadeh says.

Troy Stone, CIO for Lehigh County, Pa., agrees that the benefit of open source is its balance between cost and flexibility. "The platform we chose increased our capabilities versus commercially available products, and it did so within a scope of cost that was reasonable versus commercially available products," he says.

Adds Jon Brisbin, portal webmaster at NPC International, "Flexibility is the most important thing that we realize from open source, but being realistic, cost is right up there as a close second." By flexibility, Brisbin says he means the ability to "take an application and mangle it if we have to – take a standard install and rip out the guts and do all kinds of weird stuff and make it fit our environment."

– MARY BRANDEL

.COM FREE FOREVER

Get up to 5 included domains at no additional cost with a 1&1 website plan!*

1&1® HOME PACKAGE

- **2 FREE** Domains (.com, .net, .org, .info or .biz)
- FREE Private Domain Registration
- 150 GB Web Space
- 1&1 WebsiteBuilder
- 1&1 Photo Gallery
- 1&1 Blog
- 24/7 Toll-Free Support

~~$6.99~~

SPECIAL OFFER 3 MONTHS FREE*

1&1® BUSINESS PACKAGE

- **3 FREE** Domains (.com, .net, .org, .info or .biz)
- FREE Private Domain Registration
- 250 GB Web Space
- 25 FTP Accounts
- 50 MySQL® Databases
- 1&1 WebStatistics
- 24/7 Toll-Free Support

~~$9.99~~

SPECIAL OFFER 3 MONTHS FREE*

1&1® DEVELOPER PACKAGE

- **5 FREE** Domains (.com, .net, .org, .info or .biz)
- FREE Private Domain Registration
- 300 GB Web Space
- 50 FTP Accounts
- 100 MySQL® Databases
- PHP 5/PHP 6 (beta) Supported With Zend® Framework
- 24/7 Toll-Free Support

~~$19.99~~

SPECIAL OFFER 3 MONTHS FREE*

1&1®

MEMBER OF united internet

Get started today, call 1-877-GO-1AND1 **www.1and1.com**

*Included domains are free as long as your 1&1 web hosting package is current and in good standing. 3 months free offer valid as of May 1, 2010, a 12 month minimum contract term and a setup fee of $4.99 for the Home Package, and $9.99 for the Business Package and Developer Package apply. Visit www.1and1.com for full promotional offer details. Program and pricing specifications and availability subject to change without notice. 1&1 and the 1&1 logo are trademarks of 1&1 Internet AG, all other trademarks are the property of their respective owners. ©2010 1&1 Internet, Inc. All rights reserved.

Blending in Open Source

Integrating open source into proprietary applications has its challenges. Experienced IT execs explain how they did it. By Stacy Collett

OPEN SOURCE is almost like religion: Either you believe or don't believe that it's a better solution than enterprise software, says Sheldon Wang, chief technology officer at eHealth Inc.

For open-source evangelists like Wang, who heads IT for the Internet-based health insurance marketplace, there is no limit to the possibilities of integrating open-source applications with proprietary applications. But even believers face integration challenges. Here's a look at why and how Wang and other IT executives overcame the challenges of open-source integration.

TAKE BABY STEPS

In 2001, Mountain View, Calif.-based eHealth had survived the dot-com bust, but funding, once easy to come by in Silicon Valley, had grown tight. Open-source applications, with their lack of licensing costs, emerged as attractive alternatives to commercial software.

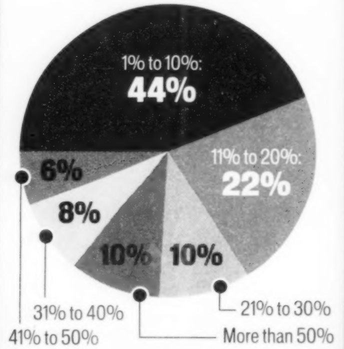
But introducing open-source applications wasn't easy. The system that ran eHealth's Web site was large and complicated — with more than 30,000 HTML pages and over 750,000 health insurance underwriting rules. So Wang proceeded slowly.

"It's a step-by-step process," Wang says. "First we put in an application server, an Apache Web server. Then, over time, we put in all the Linux operating systems and migrated away from Sun hardware. Then we switched the BEA application server out to JBoss," he adds, naming just a few of the changes eHealth made. Nine years later, his company's production environment consists of open-source applications completely, except for an Oracle database. "It's all [open-source software], from operating systems, middleware, application server, Web server and more," Wang says.

EHealth has come to rely on open source so heavily that it has established a six-member evaluation team that is solely dedicated to researching, testing and choosing the company's next open-source applications.

JUST A SLIVER

What percentage of your software portfolio is open source versus proprietary?



SOURCE: EXCLUSIVE COMPUTERWORLD SURVEY OF 109 IT PROFESSIONALS USING OPEN-SOURCE SOFTWARE, APRIL 2010

Wang admits that developers occasionally run into software compatibility problems because the open-source components aren't necessarily designed to their specs. But they resolve those issues by extensively testing during the selection process, adopting a service-oriented architecture in which each component runs independently and interacts with the others as a service, and modifying source code. "This is one of the best parts of open source," Wang says. "We've got the source code and can modify as needed."

Even if compatibility problems can be resolved, sometimes the software just doesn't work out or requires extensive modifications. "Timing of the adoption is very important. The mistake we made was adopting too early before [the software] matured," Wang says.

When it came to system and network monitoring, none of the open-source systems available had all the features eHealth required, so developers implemented several systems and discarded pieces of each one that they didn't need, says Wang. "The nice thing about this [software] is we can do the stuff without a lot of cost and contracts," he adds.

Wang advises IT leaders to start small and integrate open-source components one at a time. "Don't go to a conference and understand the benefits of an all-open-source [environment] and then go back and try to implement everything overnight. That would be a disaster," he says. "Have a few wins, and win your team over. Then you can do more."

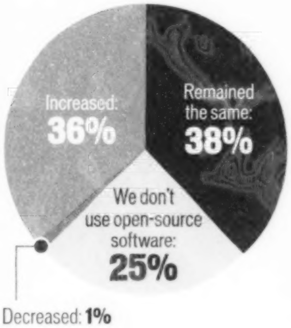
Two years ago, Econstruction's Jason Woerner decided that open source was strategically the direction to head in to update the company's flagship collaboration software, which is designed for the construction industry.

"We wanted to be able to evaluate software without going through a vendor's sales process," says Woerner, vice president of product management at the Toronto-based provider of technology and consulting services to the construction industry. What's more, he adds, with many open-source applications gaining a large community of developers, "we thought that would transform the open-source vendors into industry leaders. We want to be part of that."

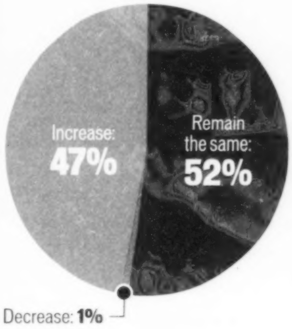
First, he chose an open-source con-

Vote of Confidence

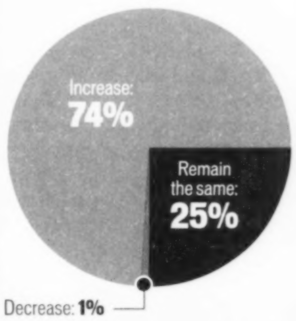
In the past six months, has your organization's use of open source:



In the next six months, do you think your organization's use of open source will:



In the next six months, do you think overall industry use of open source will:



SOURCE: EXCLUSIVE COMPUTERWORLD SURVEY OF 143 IT PROFESSIONALS, APRIL 2010

tent management application that was flexible enough to integrate with existing components and was capable of building industry-specific applications. But his development team still ran into two integration challenges.

"The biggest challenge we had was related to authorization, authentication and session timing. We want all of our systems working together such that there can be a single authorized session for each user in the system, and to make this session synchronized across all components," both enterprise and open source, Woerner explains. "If a user logs in once, they should not have to log in again when working in [enterprise content management] or any other component. If they time out in one system component, they should time out of all components."

To get common support for authorization and authentication across all components, Woerner's team wrote a custom plug-in for one of them. "The open-source world has not quite matured when it comes to single sign-on. But the beauty of open source is that this was not hard for us to overcome, or for any organization that has developer expertise," Woerner says.

His other challenge was selecting the database for the company's application. He needed to choose one database technology that all components would work with. "We accomplished this, but not without a few hiccups," Woerner explains. "When a software product says it supports a particular database, be sure to dive deeper into questions like high-availability configurations that involve the database."

CHANGE TACKS IF YOU NEED TO

Russell Taga and his team at Howcast Media Inc. in San Francisco built the how-to video Web site Howcast.com from the ground up with open-source software. To speed the development process, he tapped open-source vendors' expertise to perform networking tasks, systems administration and database administration — and it only cost what he would have had to pay one full-time employee, says Taga, who is vice president of engineering at Howcast.

"We get access to top-notch people with all those skills to help us build the cluster that we have," he notes.

> **"Don't go to a conference and understand the benefit of an all-open-source [environment], and then go back and try to implement everything overnight. That would be a disaster.**
>
> SHELDON WANG, CHIEF TECHNOLOGY OFFICER, EHEALTH INC.

The biggest issue that his developers faced was a lack of thorough documentation. "A lot of times with open-source software, there's some documentation, but you have to spend a lot of time looking at user forums and Googling for information when you run into problems," Taga says. "You have to be willing and have time to hunt for solutions to problems." Otherwise, you should drop the application and choose another open-source or commercially available application.

For example, Howcast tried an open-source application to do asynchronous processing and found that it was unreliable. "Once we started running into problems, we spent a certain amount of time trying to figure out what the issues were. If we felt like we could fix them, we would be more than happy to contribute patches [to the user community]," Taga explains. But in this case, he says, "we felt like the product just wasn't good enough and chose another alternative."

Other times, the best solution is a commercial product. Howcast found that for some of its video transcoding, the video quality produced by the open-source application FFmpeg wasn't up to snuff. So the team opted to go with licensed software.

Today, Howcast deploys 10 to 15 open-source applications. "We always evaluate things on a case-by-case basis. Obviously, our preference is an open-source solution so that we avoid the licensing cost," Taga says. But if the best solution is licensed software, "we're more than happy to do that, too." ■

Collett *is a* Computerworld *contributing writer. You can contact her at stcollett@aol.com.*

Blending in Open Source

Integrating open source into proprietary applications has its challenges. Experienced IT execs explain how they did it. **By Stacy Collett**

OPEN SOURCE is almost like religion: Either you believe or don't believe that it's a better solution than enterprise software, says Sheldon Wang, chief technology officer at eHealth Inc.

For open-source evangelists like Wang, who heads IT for the Internet-based health insurance marketplace, there is no limit to the possibilities of integrating open-source applications with proprietary applications. But even believers face integration challenges. Here's a look at why and how Wang and other IT executives overcame the challenges of open-source integration.

TAKE BABY STEPS

In 2001, Mountain View, Calif.-based eHealth had survived the dot-com bust, but funding, once easy to come by in Silicon Valley, had grown tight. Open-source applications, with their lack of licensing costs, emerged as attractive alternatives to commercial software.

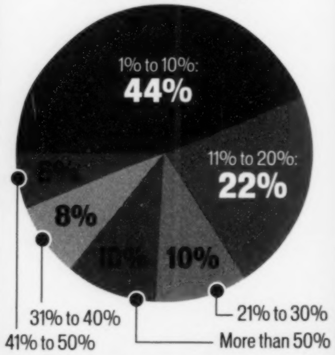
But introducing open-source applications wasn't easy. The system that ran eHealth's Web site was large and complicated — with more than 30,000 HTML pages and over 750,000 health insurance underwriting rules. So Wang proceeded slowly.

"It's a step-by-step process," Wang says. "First we put in an application server, an Apache Web server. Then, over time, we put in all the Linux operating systems and migrated away from Sun hardware. Then we switched the BEA application server out to JBoss," he adds, naming just a few of the changes eHealth made. Nine years later, his company's production environment consists of open-source applications completely, except for an Oracle database. "It's all [open-source software], from operating systems, middleware, application server, Web server and more," Wang says.

EHealth has come to rely on open source so heavily that it has established a six-member evaluation team that is solely dedicated to researching, testing and choosing the company's next open-source applications.

JUST A SLIVER

What percentage of your software portfolio is open source versus proprietary?



SOURCE: EXCLUSIVE *COMPUTERWORLD* SURVEY OF 109 IT PROFESSIONALS USING OPEN-SOURCE SOFTWARE, APRIL 2010

Wang admits that developers occasionally run into software compatibility problems because the open-source components aren't necessarily designed to their specs. But they resolve those issues by extensively testing during the selection process, adopting a service-oriented architecture in which each component runs independently and interacts with the others as a service, and modifying source code. "This is one of the best parts of open source," Wang says. "We've got the source code and can modify as needed."

Even if compatibility problems can be resolved, sometimes the software just doesn't work out or requires extensive modifications. "Timing of the adoption is very important. The mistake we made was adopting too early before [the software] matured," Wang says.

When it came to system and network monitoring, none of the open-source systems available had all the features eHealth required, so developers implemented several systems and discarded pieces of each one that they didn't need, says Wang. "The nice thing about this [software] is we can do the stuff without a lot of cost and contracts," he adds.

Wang advises IT leaders to start small and integrate open-source components one at a time. "Don't go to a conference and understand the benefits of an all-open-source [environment] and then go back and try to implement everything overnight. That would be a disaster," he says. "Have a few wins, and win your team over. Then you can do more."

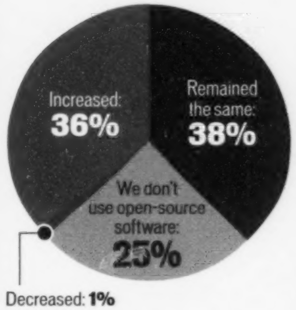
Two years ago, Econstruction's Jason Woerner decided that open source was strategically the direction to head in to update the company's flagship collaboration software, which is designed for the construction industry.

"We wanted to be able to evaluate software without going through a vendor's sales process," says Woerner, vice president of product management at the Toronto-based provider of technology and consulting services to the construction industry. What's more, he adds, with many open-source applications gaining a large community of developers, "we thought that would transform the open-source vendors into industry leaders. We want to be part of that."

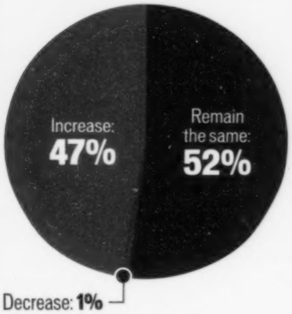
First, he chose an open-source con-

Vote of Confidence

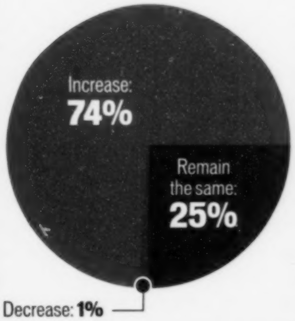
In the past six months, has your organization's use of open source:



In the next six months, do you think your organization's use of open source will:



In the next six months, do you think overall industry use of open source will:



SOURCE: EXCLUSIVE *COMPUTERWORLD* SURVEY OF 143 IT PROFESSIONALS, APRIL 2010

tent management application that was flexible enough to integrate with existing components and was capable of building industry-specific applications. But his development team still ran into two integration challenges.

"The biggest challenge we had was related to authorization, authentication and session timing. We want all of our systems working together such that there can be a single authorized session for each user in the system, and to make this session synchronized across all components," both enterprise and open source, Woerner explains. "If a user logs in once, they should not have to log in again when working in [enterprise content management] or any other component. If they time out in one system component, they should time out of all components."

To get common support for authorization and authentication across all components, Woerner's team wrote a custom plug-in for one of them. "The open-source world has not quite matured when it comes to single sign-on. But the beauty of open source is that this was not hard for us to overcome, or for any organization that has developer expertise," Woerner says.

His other challenge was selecting the database for the company's application. He needed to choose one database technology that all components would work with. "We accomplished this, but not without a few hiccups," Woerner explains. "When a software product says it supports a particular database, be sure to dive deeper into questions like high-availability configurations that involve the database."

CHANGE TACKS IF YOU NEED TO

Russell Taga and his team at Howcast Media Inc. in San Francisco built the how-to video Web site Howcast.com from the ground up with open-source software. To speed the development process, he tapped open-source vendors' expertise to perform networking tasks, systems administration and database administration — and it only cost what he would have had to pay one full-time employee, says Taga, who is vice president of engineering at Howcast.

"We get access to top-notch people with all those skills to help us build the cluster that we have," he notes.

> **"Don't go to a conference and understand the benefit of an all-open-source [environment], and then go back and try to implement everything overnight. That would be a disaster.**
>
> **SHELDON WANG,** CHIEF TECHNOLOGY OFFICER, EHEALTH INC.

The biggest issue that his developers faced was a lack of thorough documentation. "A lot of times with open-source software, there's some documentation, but you have to spend a lot of time looking at user forums and Googling for information when you run into problems," Taga says. "You have to be willing and have time to hunt for solutions to problems." Otherwise, you should drop the application and choose another open-source or commercially available application.

For example, Howcast tried an open-source application to do asynchronous processing and found that it was unreliable. "Once we started running into problems, we spent a certain amount of time trying to figure out what the issues were. If we felt like we could fix them, we would be more than happy to contribute patches [to the user community]," Taga explains. But in this case, he says, "we felt like the product just wasn't good enough and chose another alternative."

Other times, the best solution is a commercial product. Howcast found that for some of its video transcoding, the video quality produced by the open-source application FFmpeg wasn't up to snuff. So the team opted to go with licensed software.

Today, Howcast deploys 10 to 15 open-source applications. "We always evaluate things on a case-by-case basis. Obviously, our preference is an open-source solution so that we avoid the licensing cost," Taga says. But if the best solution is licensed software, "we're more than happy to do that, too." ■

Collett *is a* Computerworld *contributing writer. You can contact her at stcollett@aol.com.*

HOW TO Get Ahead DESPITE A Weak Boss

You're ready to advance, but you've got an unsupportive manager. Here are five ways to boost your IT career anyway.

By Mary K. Pratt

WHEN IT COMES TO managing people and helping them advance their career goals, many IT managers fall flat. Is it possible to get ahead when your boss is unwilling or unable to support your ambitions? Sure, says Eric Bloom, if you're willing to take some initiative.

Bloom, who has held senior executive positions at companies such as Monster Worldwide Inc. and Fidelity Investments, tells the story of a quality assurance worker at one of his former employers who wanted to move into programming: Her manager wasn't strong on staff development, so the QA employee took matters into her own hands. She learned .Net, so when her team found bugs in new programs, she could help coordinate fixes with the programmers.

In the process, she became a valuable asset in the eyes of both her own manager and the person who managed

Continued on page 28

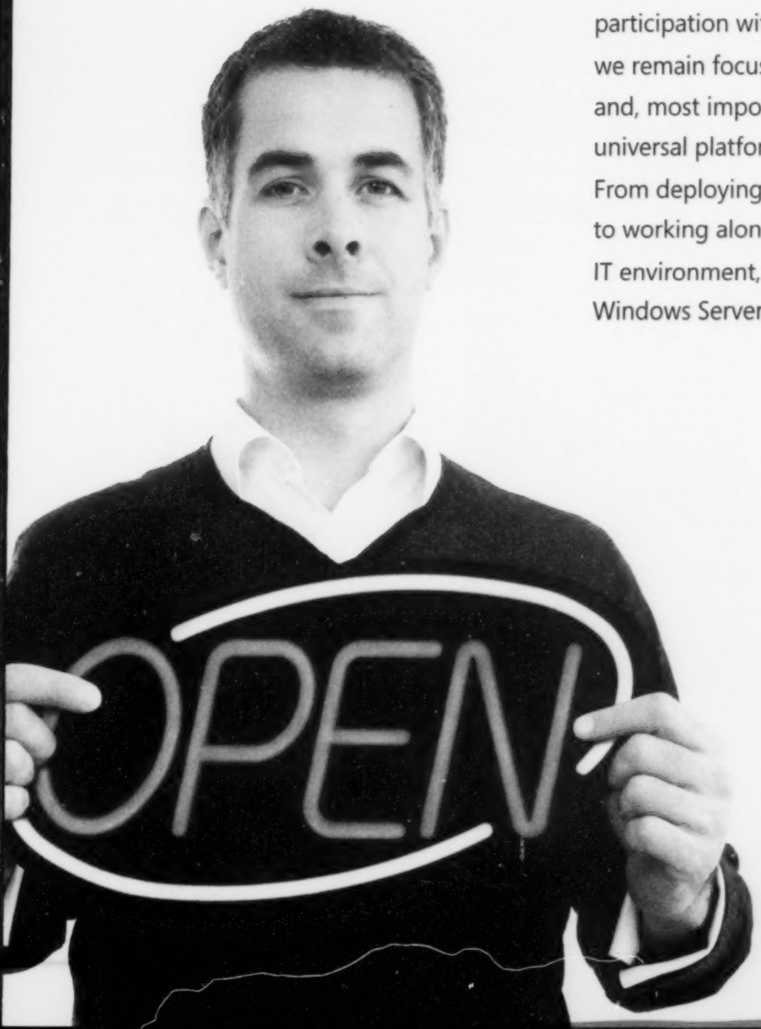
©OLLY/FOTOLIA.COM

Microsoft

Open to open source.

When it comes to deploying open source applications, look to Windows Server 2008 R2.

Let's face it: working with others helps everyone. As our participation with open source communities progresses, we remain focused on fostering innovation, progress, and, most importantly, business success through the universal platform of Windows Server® 2008 R2. From deploying and running open source applications to working alongside other platforms in a diverse IT environment, we're committed to making Windows Server 2008 R2 your platform of choice.



To learn more about Microsoft and open source, visit:
http://www.microsoft.com/opensource

Windows Server

Continued from page 26

the programming team. By successfully bridging the two departments, Bloom says, the QA staffer was able to move into the job she had wanted.

Bloom, now the president and founder of Manager Mechanics LLC, a management training firm in Ashland, Mass., says many bosses in IT aren't strong on mentoring and team-building. They often received promotions themselves because they were technically strong, and not necessarily because they had strong people skills or instinctive leadership qualities.

All of which means you might find yourself with a boss who's a nice person but isn't well equipped to help you advance your career.

The good news: Unless you're truly in a dead-end job, it is possible to get in on those big projects, get yourself noticed and ultimately get a promotion without ticking off your manager in the process. Here are five strategies to help you get ahead when your boss isn't on board.

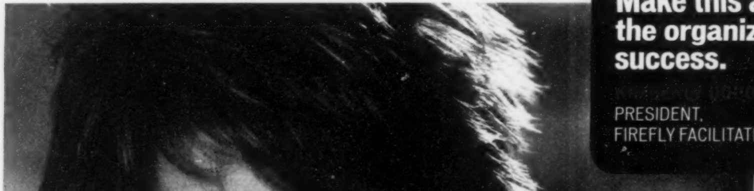
1 BE CLEAR ON WHAT YOU OFFER

Most people aren't very good at articulating what value they bring to the workplace, says Michael Ehling, a Toronto-based executive coach at The McNeill Group, a Plantation, Fla.-based consultancy. They're too vague on what they offer and what talents they have, often underestimating their value in the process.

So before you begin your campaign for advancement, take time to think about your passions and motivations, as well as your needs at work, he says. You might find that you are passionate about solving problems but also want to work with cutting-edge technology.

"When you define those [strengths], then you can look out to your peers and boss and ask, 'What are your needs, and how can I apply my value to help you?' " Ehling says. "Being seen as helpful is going to get you projects and promotions. And in no way will you be seen as going around, over or behind your boss, because all you're doing is serving needs."

> **"Take a pay-it-forward mentality. Make this about . . . the organization's success.**
>
> [illegible]
>
> PRESIDENT,
> FIREFLY FACILITATION INC.



2 ASK FOR WHAT YOU WANT

Even if your manager hasn't been supportive so far, you should sit down for a face-to-face chat, says Thuy Sindell, vice president of client services at San Francisco-based leadership coaching service Mariposa Leadership Inc. and co-author of *The End of Work As You Know It*.

"Let him know that you need him to be more of an advocate," says Sindell. But — and this is a big *but* — don't start and end the conversation there. "It's got to be framed in the positive, in the form of a request," she explains. "Then you have to ask, 'Is there anything I've been doing that has prevented you from being an advocate for me?' because there could be a whole laundry list."

Be ready to listen to what your boss needs from you, and be ready to articulate what you can do for him and how your skills can help the organization. Your boss is more likely to be your advocate if you can consistently deliver what's needed.

3 COMMIT TO YOUR BOSS'S SUCCESS

It may sound counterintuitive if you're saddled with a sad-sack manager, but if you want to succeed, first make sure your boss does, says Ehling.

He suggests that workers should set their minds to being "100% committed to the boss's success," which he acknowledges can be a difficult task if you don't always agree with your boss's decisions. If you're committed to her success, however, then it becomes part of your job to point out land mines to her — be they political ramifications or vendor problems or a technical glitch — and offer possible ways around them.

Once you've made that commitment,

the next step is to figure out what will make your boss successful. Find out what her personal and organizational goals are. Ehling suggests meeting with your boss to ask about those goals and to let her know that you're committed to helping her get those organizational and personal wins.

4 MAKE CONNECTIONS

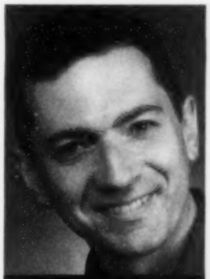
If you build relationships throughout your organization, you'll be better positioned to be considered for opportunities or job openings, says Kimberly Douglas, president of FireFly Facilitation Inc. in Atlanta and author of *The Firefly Effect: Build Teams That Capture Creativity and Catapult Results.*

"Take a pay-it-forward mentality. Make this about contributing to the organization's success," Douglas says.

Don't start by looking out for your best interests, but rather, set out to learn more about others in the organization, she explains. Get together for lunch with someone you've met but don't know well. Think of a person you hear mentioned around the office whom you'd like to meet, then find a mutual connection to make the introduction.

It helps to have a real reason to connect, rather than a generic "Let's get together" request, Douglas advises. If you'll be working with a new team to implement a new system, for example, ask to meet with the team leader in advance to learn more about what she does and what she wants to achieve with the system.

Seek out the colleague who was recently certified in a new tech specialty or just returned from a big IT conference. Or plan lunches with colleagues and managers in the business departments that your team works with frequently.



> **"Being seen as helpful is going to get you projects and promotions.**
>
> EXECUTIVE COACH, THE McNEILL GROUP

Because the best conversations involve the exchange of ideas, be ready to both listen and to talk about yourself — about what you do, what you offer and how you can help, Douglas adds. As you build these types of relationships, you'll likely find that colleagues will think of you when a high-profile project rolls around or a job opens up.

"It's building that internal network and being your own advocate, because no one is going to network for you," Sindell says. "And you won't have to be too concerned about stepping on your boss's toes because you're being requested by others."

5 DO THE JOB YOU EVENTUALLY WANT

If you want to get noticed, then go ahead and demonstrate what you've got, says Von Wright, an Atlanta-based marketing vice president at AT&T Inc. "You have to do the job you want to be doing, and you have to start doing it today," he says.

For example, if you are a senior manager in a technology role but want to lead business teams that define strategy, be the one on your current projects who translates business metrics into solutions.

Of course, you won't have a new title or an official promotion — yet — and you'll have to continue to fulfill all your existing obligations as expected. But you'll be using skills that will be essential to the position you want to hold someday, Wright says.

"You never want to miss the opportunity to demonstrate your skills in front of leaders who aren't necessarily your boss," he says. Wright notes that he used the strategy himself to move into his current job from his past position as vice president of IT strategy, planning and business integration.

In short, Wright and other career experts advise you to act like the employee you're ready to become. If your boss is not supportive of your efforts, have faith that someone else will be.

"Any good leader is always looking for the right people," Wright says. "And any good leader, when exposed to people who have the right qualities, will start working to get that individual on the team." ■

Pratt *is a* Computerworld *contributing writer. Contact her at marykpratt@verizon.net.*

Dead-end Job?

All your efforts to work around an inattentive boss won't help much if you're stuck in a truly dead-end job. How do you know when it's time to bail? Career experts say the following are signs that it is time to move on:

- **Your boss blames you.** "That's a very clear sign that he's not your advocate," says leadership development coach Thuy Sindell.
- **Your office feels like high school all over again.** Lots of workers and bosses don't get along, but if the situation seems juvenile – if there's an excess of gossiping, catty behavior or backstabbing – it will be hard for you to succeed.
- **There's nowhere to go.** There's no sense in getting your boss to be an advocate, points out Kimberly Douglas, president of FireFly Facilitation, if there are no possible promotions or new skills to learn.
- **Your boss isn't respected by other executives.** If your boss isn't aligned with the company's goals and is at risk of being fired, you could end up being collateral damage.
- **The company doesn't perceive IT as an equal business partner.** A company that doesn't value its IT department won't be investing in technology or staff, says Eric P. Bloom, president of Manager Mechanics, and you'll likely find your skills becoming obsolete if you stick around.

– MARY K. PRATT

A Robot *in the* Pharmacy

Robotic creation of IV solutions in hospital pharmacies reduces errors and saves money. **By Mary K. Pratt**

WHEN PHARMACIST Rita K. Jew saw a robot that mixes intravenous drugs at an industry event, she instantly knew she wanted it for her own hospital.

"This is definitely a breakthrough in technology," says Jew, executive director of pharmacy and nutrition services at Children's Hospital of Orange County in California.

Despite medical and technological advances, most hospital pharmacies still prepare intravenous drug solutions manually. But the founders of medical equipment maker Intelligent Hospital Systems believed they could use technology to do the job in a safer, cheaper and more efficient manner. The result is RIVA, which fully automates the preparation of IV solutions in hospital pharmacies. RIVA, whose name is short for Robotic IV Automation, took the winner's spot in the manufacturing category of the 2009 *Computerworld* Honors Program.

"This is an example of how technology is being applied to do something better," says Roger A. Edwards, an assistant professor in the departments of pharmacy practice and health sciences at Northeastern University in Boston.

The common practice of mixing IV drug compounds by hand is time-consuming and susceptible to mistakes, says Luci A. Power, senior pharmacy consultant at San Francisco-based Power Enterprises, who works with Intelligent Hospital Systems.

"Many errors have resulted from this manual compounding, and much microbial contamination has been documented in this compounding," she says. "As long as humans compound IV drug therapy, there are problems to contend with. The use of robotics alleviates many of these issues."

FILLING A NEED

The idea for a pharmacy robot came from a hospital, says Thom Doherty, chief technology officer at Winnipeg, Manitoba-based Intelligent Hospital Systems. Market research confirmed that pharmacists wanted an in-house automated system that could mix IV drug compounds, he says.

Intelligent Hospital Systems was formed in 2004 to develop such a robot, bringing together a team of mechanical, electrical and computer engineers to do the job. Although each discipline was crucial, Doherty acknowledges that "it's the software that drives all the components."

Cornel Van Egmond, a senior software developer at Intelligent Hospital Systems, says RIVA's software has two key parts: a user interface and back-end logic that controls the system.

Van Egmond says that nearly all the software for RIVA was written in-house. The team selected Windows XP as RIVA's operating system and wrote in C# for the .Net 2.0 platform.

The company used some off-the-shelf

THE COMPUTERWORLD HONORS PROGRAM

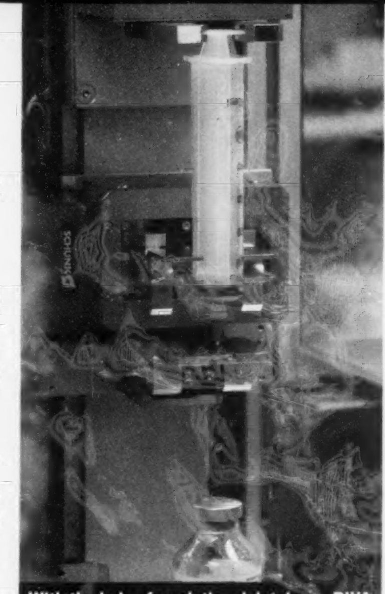
At a Glance

Organization: Intelligent Hospital Systems, a medical device maker based in Winnipeg, Manitoba, designs and develops high-tech automated equipment for hospitals. Its first and only product to date is a system called RIVA – for Robotic IV Automation – which automates the preparation of intravenous solutions in hospital pharmacies.

Workforce: Intelligent Hospital Systems has about 80 employees.

Project team: Some 16 computer scientists and computer engineers work on RIVA's IT components.

Project ROI: RIVA costs about $1 million, but the company calculates that hospital pharmacies can see a return on investment within two years because RIVA can reduce the amount of medicine wasted in the preparation process and cut the need for costly premixed medications.



With the help of a relational database, RIVA is able to handle vials, syringes and other objects of various shapes and sizes.

hardware, including robotic grippers and programmable logic controllers.

Doherty and Van Egmond say one of the biggest challenges was that pharmacists wanted to be able to continue working with the lab equipment they already used; for example, they didn't want to switch to proprietary syringes and vials to accommodate the robot.

Therefore, Intelligent Hospital Systems engineers had to design a robot that could handle pieces of equipment that weren't uniform in size or shape.

Engineers turned to technology to solve that problem, Doherty says. RIVA uses a relational database to hold the data that determines the robot's movements for handling equipment. The database also stores the processing steps used to prepare the IV products. RIVA uses its database to understand how to accept input products (syringes, IV bags and vials, for example) that are of varying dimensions.

RIVA also uses a relational database to securely store drug order information, confidential patient information and other important data.

The engineers decided to use Sybase Inc.'s SQL Anywhere relational database for those purposes; they determined that it's well suited to serve as an embedded application because of its low overhead and small footprint.

"It's basic engineering, but it's how it came together and integrated all the hardware and all these systems to make them work in concert that's the real accomplishment," Van Egmond says.

The resulting self-contained robot is 5 feet wide, 10 feet long and 8 feet tall. RIVA works in a closed environment, thereby reducing human exposure to medicines and protecting both people and drugs from contamination.

QUALITY CONTROL

RIVA uses sterile air and high-intensity UV light for sterilization, and it has cameras, vision systems and scales to ensure the end products are correct. It creates a detailed audit trail as well.

The robot can prepare between 40 and 60 doses per hour, Doherty says, and it uses its database of information to verify and label the doses it dispenses.

He notes that hospitals that use manual processes will prepare IV drugs once or twice during a 24-hour time frame, and much of the medicine will go to waste as doctors change prescriptions. Some pay a premium to have the solutions prepared by a third party. So even though RIVA sells for about $1 million, Doherty says hospitals can see a return on their investment within 18 to 24 months by reducing the amount of wasted medicine.

Jew says she was sold on RIVA's automated safeguards. "They really thought through every single step," she says. "There's no way for the machine to take shortcuts. I can't claim the same with human production."

But she sold her hospital's executives on RIVA by touting its ability to save money, calculating a two-to-three-year ROI. Jew says the hospital used to waste 20% to 30% of the IV medicine it made, but because of RIVA's efficiency, which cuts the lag time between when a doctor orders a prescription and when the medicine is used, that figure is now less than 10%.

Children's Hospital of Orange County was the first to use RIVA; it started delivering IV doses prepared by the robot in December 2008. Doherty says that even though the economy has forced hospitals to cut spending, three RIVAs are in use at hospitals today, and at least 12 more installations are planned for this year and next. ■

Pratt *is a* Computerworld *contributing writer in Waltham, Mass. Contact her at marykpratt@verizon.net.*

How to Avoid a 'Silo Mentality'

Building a robot to dispense IV solutions required computer, electrical and mechanical engineers to work cooperatively alongside pharmaceutical experts. Such working arrangements often give rise to silos, with each discipline focusing on its contribution alone and defending its needs and views. Yet Intelligent Hospital Systems CTO Thom Doherty says the company made sure that didn't happen.

"We brought everyone together in meetings, made sure barriers were broken down," he says. "So when we looked at challenges or new features, we had cross-disciplinary input."

Doherty says company leaders ensured that workers had a voice when discussing ways to overcome design and development obstacles.

"The mechanical guys could make any observations on software. Or the software people could make suggestions on the mechanical side. And the suggestions actually changed some designs," he says.

Nilofer Merchant, CEO and chief strategist at Rubicon Consulting Inc., says companies can rid themselves of silos if they establish the right mentality among workers. Leaders need to foster an environment where employees don't see themselves as individual contributors but rather as co-creators who advocate for the best ideas, regardless of their own individual roles in the organization.

"It's a stance that says it's not about my assigned role, but how do I help this organization to win; it's focused on outcome," she explains.

To do this, managers can't act like the "chief of answers," Merchant says. Nor can they allow others to adopt that attitude. Managers also need to create an atmosphere in which workers are encouraged to build on one another's ideas – instead of just explaining why other people's ideas won't work.

– MARY K. PRATT

SECURITY MANAGER'S JOURNAL | MATHIAS THURMAN

iPad Intro Brings A Nasty Surprise

The company hasn't bought **any iPads.** So, why are so many suddenly **on the network?**

Trouble Ticket

AT ISSUE: Users are bringing in personal devices like iPads and connecting to the network.

ACTION PLAN: Find out how this became possible, and make the necessary changes to prevent it.

I DON'T LIKE surprises. I wish projects wouldn't get launched without the sponsors seeking my advice on security measures first. If you read this column regularly, you've heard me say all of this before. I try to keep an eye on everything, but companies are complex organizations, and it's inevitable that something will sneak by.

A case in point: A couple of weeks ago, I noticed that a lot of people were using Apple iPads in our conference rooms. We haven't bought any iPads. I wanted to know whether they were being used on our internal network. Oh, yes, the users assured me; it was no problem. Well, I thought, it should be a problem; it should be impossible, in fact.

To remedy this situation, I needed to find out why it was so easy for users to attach personal devices to our network and how that came to pass. I started digging.

What I learned was that the seeds of the problem were planted last year, when we were deciding how phones would synchronize with Microsoft ActiveSync. We realized that users would have faster syncs through our company's guest wireless network rather than a phone's 3G network. All well and good; after all, our guest wireless access can't be used to access our internal network.

In the course of testing this configuration, the network team discovered a serious glitch. On occasion, when they lost the connection to the wireless access points, some phones didn't switch back to their 3G networks. Users wouldn't notice that they were unconnected until the lack of e-mail on their phones became obvious.

To get around that, a couple of network administrators worked with the Windows Server team to issue certificates to users that were tied to Active Directory. With certificates, by creating a new service set identifier, users could connect to the guest access point without even entering a password. If a phone lost its wireless connection, it could reconnect seamlessly using the certificate for authentication. Pretty cool, right? For the users, yes, but not for me.

Such certificates can be exportable or nonexportable. Nonexportable would be my choice, because exportable certificates can be used multiple times. But I wasn't asked, and because of complexities and costs, exportable certificates were created.

We have another set of access points designed to give company-owned laptops access to our internal network. These connections are also done through a captive portal, but instead of a password, employees must use their SecureID tokens. But word got out that certificates were available for wireless authentication, and unknown to me, the internal access points were reconfigured to allow certificates for authentication.

I had to dig to find out why it was so easy for users to attach their devices to our network.

That may have been OK for company-owned devices, but with exportable certificates, any user with a certificate could link it to an unlimited number of devices. As a result, employees were attaching unauthorized iPads, personal laptops and other rogue devices to our network.

I can't vouch for the integrity of any device that a user brings in. In many cases, these are machines that an employee's kids have used to play games, chat on Facebook and download who knows what. Since they aren't corporate resources, we have no control over what software, antivirus protection or security patches are installed. And then there are legal issues to consider, since we can't control a personal asset.

So now I have a new task at hand that will more than likely cause me a lot of grief: to pull back the current certificates, re-architect and reissue nonexportable certificates, and restrict them to the guest wireless access. ■

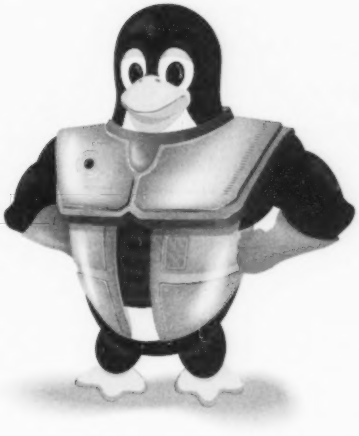
COMPUTERWORLD.COM

JOIN IN

To join in the discussions about security, go to **computerworld.com/blogs/security**

This week's journal is written by a real security manager, **"Mathias Thurman,"** *whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com.*

Enterprise
Linux Support



From $119
Per server/per year*

Unbreakable Linux

ORACLE®

oracle.com/goto/store
or call 1.800.ORACLE.1

*Terms, conditions and restrictions apply. $119 price solely includes access to Linux binaries and updates.
24x7 global support starts at $499 per year/per server.

Copyright © 2008, Oracle. All rights reserved. Oracle is a registered trademark of Oracle Corporation and/or its affiliates.
Other names may be trademarks of their respective owners. The Tux design is copyrighted work of Larry Ewing.

OPINION

Thornton A. May

Don't Underrate Government IT

GOVERNMENT IS very much in the headlines of late. Some people think we have too much of it, others not enough. No matter which side of that argument you're on, I believe you'd have to agree that we need to re-evaluate how we think about IT in government.

What government IT leaders do, and how they do it, is important to all of us.

Government IT, and in particular federal government IT, has been misunderstood for too long. It is not boring. I will go well beyond that, in fact, and say that it is innovative and cutting-edge.

You probably doubt those claims. There is a general presumption — based in part on media coverage of catastrophic system failures and recurring, highly visible episodes of poor project management — that government IT professionals are doing it wrong. That's just not the case.

We need to humanize, not demonize, this special IT tribe. The loudest voices we hear on this subject today tend to focus on what government IT is doing wrong. But a chorus of persistent voices is proclaiming what government IT does better than others. And as a futurist, I have conducted a series of broad-based, multi-institutional research initiatives to examine what government IT might do next.

Many of you have never actually met a government IT professional. I have known many. Over the past two years, I have conducted something of a walkabout in the IT shops of federal, state and local governments. The primary purpose of my fieldwork was to learn about how these public servants view the future. I sought to understand the things that public sector organizations need to know and the systems they need to build and operate to help them serve the current and future needs of their various constituencies.

In the process, I have been collecting technology maps delineating where the organizations have been, where they are now and where they plan to go in the future. This immersion in what amounts to a separate world has given me huge respect for the men and women who work in government IT.

The complexity government IT workers deal with is mind-boggling.

Rethinking how we govern ourselves is a natural part of living in a democracy. Thomas Jefferson thought that every generation needed to rethink government. We've taken that to heart, as David Osborne and Ted Gaebler documented in *Reinventing Government*: Since 1905, there have been 10 commissions aimed at trying to make the federal government more efficient.

Many government IT professionals face Sisyphean challenges. The size of the mission always seems to dwarf the availability of resources. Some consider the government an Industrial Age bureaucracy unsuited for the problems of the Information Age. In their view, government IT is what Trekkers would term a *Kobayashi Maru*, a no-win scenario.

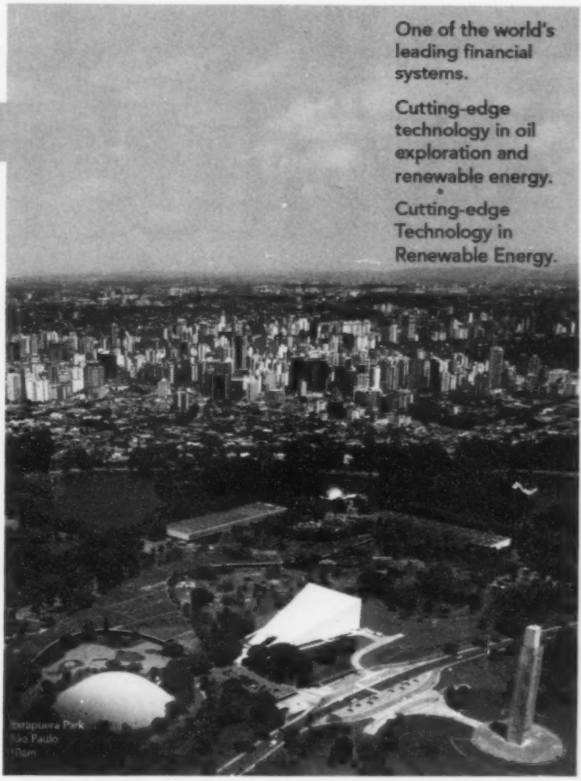
The complexity that government IT professionals deal with is mind-boggling. The pressure, the unanticipated snafus and the persistent scarcity of funds make this one of the most difficult jobs in the world. From my perspective, people like Teri Takai, former CIO of California; David Wennergren, deputy CIO of the Department of Defense; Ed Gough, deputy commander/technical director at the Naval Meteorology and Oceanography Command; Rama Dhuwaraha, CIO of the Lexington, Ky., city government; and J. Pari Sabety, director of the Ohio Office of Budget and Management, are among the world's greatest IT leaders.

Government IT is now aggressively embarked on a mission to import best practices from the world outside government. I respectfully submit that we outside government have much to learn from those who work so very hard inside government to provide us with the support, services and safety we take for granted. ■

Thornton A. May *is the author of* The New Know: Innovation Powered by Analytics *and executive director of the IT Leadership Academy at Florida State College at Jacksonville. You can contact him at thorntonamay@aol.com.*

A natural choice for your next IT partner. Brazil it.

Reliable IT
partner
required?
Central Park
NYC
8am


One of the world's
leading financial
systems.
Cutting-edge
technology in oil
exploration and
renewable energy.
Cutting-edge
Technology in
Renewable Energy.
brandworks
Ibirapuera Park
São Paulo
10am

Increase your business competitiveness.
Discover Brazil.

Brasil IT+
Value beyond expectations

GARTNER OUTSOURCING
SUMMIT LATIN AMERICA
BRASSCOM GLOBAL IT FORUM

June 8-10, 2010 - Sao Paulo, Brazil

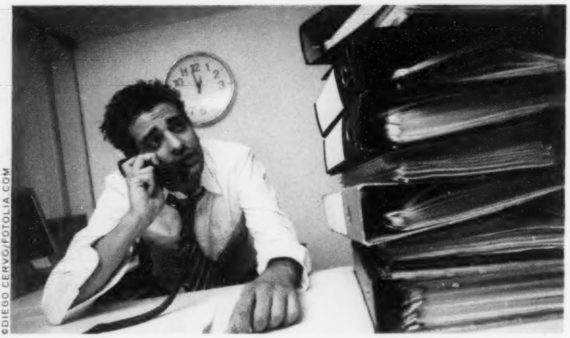
You are our special guest to
Latin America's major IT event.

For further information visit us at www.gartner-brasscom.com

BRASSCOM
WWW.BRASSCOM.ORG.BR

ApexBrasil

Career Watch



©DIEGO CERVO/FOTOLIA.COM

The Recession's Good News

You survived all the layoffs in your department, though your salary may have been cut, and you've been working harder than ever to make up for the reduced head count. Of course, that's what scientists would refer to as an anecdotal account of increased worker productivity, and they don't put much stock in anecdotal evidence. But in January The Conference Board came out with some empirical evidence to back up what you've been saying.

Per-hour worker productivity in the U.S. grew 2.5% in 2009, according to The Conference Board's Total Economy Database. At the same time, employment decreased by 3.6%, and hours worked per employee dropped by 1.5%. The rise in productivity last year, as well as the 3% increase that The Conference Board projects for 2010, is a reversal of a long downward trend. But the rise is entirely due to the stresses of the recession, the organization says.

In contrast, The Conference Board notes that per-hour worker productivity dropped 1% in Europe last year, and Bart van Ark, chief economist for the organization, attributed the divergence to the way companies in the two parts of the world reacted to the recession.

"U.S. employers have reacted much more strongly to the recession than their European counterparts in terms of cutting jobs and hours," he said. "In 2010, both Europe and the United States will see higher productivity growth coming out of recession. However, a jobless productivity recovery is the most likely scenario in both regions."

So, there you have it. The recession's silver lining is that you've been working a lot harder – just like you've been saying.

1%

Decrease in per-hour worker productivity in Europe in 2009.

SOURCE: THE CONFERENCE BOARD

Q&A

Tom Silver

Dice's senior vice president for North America discusses **the lack of motivation among IT workers** and the implications of a 'retentionless' recovery.

What did Dice.com find out about the technology workforce in its recent salary survey? Technology professionals are highly dissatisfied. Nearly one-third of the U.S. technology workforce visit Dice.com every month, so we feel like we are in a regular conversation with technology professionals. Because of that, we knew disenchantment was rising. Nonetheless, the fact that nearly half, or 47%, of technology professionals felt their employers had done nothing to keep them motivated was a surprise. Technology professionals were asked to do a lot more with less and find cost savings in all departments during the downturn. Given the significant time and money companies spend recruiting technology professionals, you have to wonder why they would put that investment at risk. It seems very shortsighted.

What are the implications of so many tech professionals feeling unmotivated? We believe this has the chance to be a "retentionless" recovery that is now under way in tech. Better trends are being seen in technology employment – and not just by us. Specifically, we see more searches by employers of the Dice résumé database, and job postings have started to grow year-over-year in key markets like New York and Silicon Valley. Today, the unemployment rate for technology is 4.5% – substantially better than the national average, and improved from its cycle high of 6.2%. To us, it's simple: Technology professionals are very active about managing their careers. If they are unmotivated at work, they'll remedy that situation by finding a new job.

So, top talent that is able to move into new positions with better compensation and work environments will do so. What about everyone else? No one is powerless. If you don't want to change jobs, find a way to talk to your boss about how you can be more valuable to the company. Maybe it's expanding your skill set through continued education or working on a new type of project. It's important to map out your own career – there's no reason to be held back by the system.

Are companies making a mistake in ignoring everyone but the stars in their tech workforces? Absolutely. When there are different sets of expectations for different employees, it's like a bad disease. If you hold everyone to the same standard and treat them fairly, we find that technology professionals, and really all employees, rise to the occasion.

– JAMIE ECKLE

dtSearch
dtSearch
Instantly Search Terabytes of Text
Desktop with Spider
Network with Spider
Publish (for portable media)
Web with Spider
Engine for Linux
Engine for Win & .NET

Instantly Search Terabytes of Text

- 25+ full-text and fielded data search options
- Built-in file parsers and converters highlight hits in popular file types
- Spider supports static and dynamic web data; highlights hits with links, formatting and images intact
- API supports C++, .NET, Java, SQL, etc. .NET Spider API. Includes 64-bit (Win/Linux)
- Fully-functional evaluations available

Content extraction only licenses also available

"Bottom line: dtSearch manages a terabyte of text in a single index and returns results in less than a second" — InfoWorld

dtSearch "covers all data sources … powerful Web-based engines" — eWEEK

"Lightning fast ... performance was unmatched by any other product" — Redmond Magazine

For hundreds more reviews, and hundreds of developer case studies, see www.dtSearch.com

1-800-IT-FINDS • www.dtSearch.com

The Smart Choice for Text Retrieval® since 1991

Personalized IT newsletters from Tech Dispenser.

You pick the topics.
You pick the sources.
You pick the frequency.

Build your own newsletter featuring your favorite technology topics — cloud computing, application development, security — over 200 timely topics, from more than 700 trusted sources.

Get started today. It's free.
www.techdispenser.com

TECH DISPENSER

Disturbingly personal newsletters

FREE BOOK
Server Room Climate & Power Monitoring

MiniGooseXP II Climate Monitor

$299

Monitor
- Temperature
- 3 Analog Inputs
- 16 Digital Sensor Ports

Alerts with Escalations
- E-mail
- SNMP (v1, v2c, v3)

Features
- Built-in Web Interface
- Optional IP Web Cams
- Free Firmware Updates

To order your copy, visit ITWatchDogs.com/Book

ITWatchDogs

sales@itwatchdogs.com • 512.257.1462 • www.itwatchdogs.com

IT|careers

Systems Analyst, Irving, TX & other client locations: (Multiple Openings) Perform technical and functional analysis, systems support, analyze, design specification, config, architecture, testing, documentation, & implementation based on user needs. Salary DOE. MS/BS in CS, MIS, CIS, Math, Tech, Bus, Eng (any), or related in any one of the skill set: 1) SAP R3, ABAP4, Java XI/PI, SAP NW, MDM, HR ABAP, IDOC, RFC, HTTP, JDBC, SOAP within PI, SAP architectures like ICWeb, PCUI, WebDynpro; C/C++, OOABAP, Oracle, SQL Server, FoxPro, Servlets, JSP, JavaScript, & Windows. BS W/2yrs exp & ref KSL1020. 2) SAP R3 PI, ABAP4, Java, SAP NW, RFC, HTTP, JDBC, WebDynpro, C/C++, OOABAP, Oracle, SQL Server, JSP, JavaScript, & Windows. BS W/2yrs exp & ref KV1022. 3) SAP R3 XI/PI, ABAP4, J2EE, SAP NW, HR ABAP, IDOC, ALE, EDI, SAP HCM, Web Dynpro, C, C++, OOABAP, Oracle, SQL Server, SAP Modules SD, MM, WM, PP, PM, PS & FI/CO. BS W/5yrs exp & ref BP1024. 4) SAP R3, ABAP4, SAP NW, VMWARE, Windows Clustering, C/C++ , Visual Basic, VB Script, Shell Script, Tivoli Storage Mgr, RILO, DRAC, VERITAS Netbackup, WSH, Win 2003/2000/NT, Novell Netware, Solaris & Linux. BS W/5yrs exp & ref PVR1026. 5) Oracle, SQL Server, SAP R3, SAP NW, SQL scripting, PMP, Visio, Rational Rose, Requisite Pro, Bus Rules, ABAP4, ALV, BDC, SAP Scripts, SmartForms, ALE, IDOC, BADI, BAPI, C/C++, SQL, HTML, Java, Informatica, Win 2000/NT, & Linux. MS W/exp & ref MSD1028. 6) SAP R3 ECC, ABAP4, SOLMAN, PI Integ Builder, .Net, Java, Data Power, Oracle, Unix, Solaris, & Win 2003/XP. MS W/1yr exp & ref NRS1032. Mail resume to MOURI Tech LLC, 1303 W Walnut Hill Ln, Suite 355, Irving, TX 75038 or email jobs@mouritech.com.

❖

Systems Analyst, S. Plainfield, NJ & Other Client Locations: Perform tech & funct analysis, sys supp, dsgn spec, config, document, test, and implement using Informatica, Business Objects, Servlets, Oracle 8i, SQL Server, FoxPro, Sybase, VB, FrontPage, Visual Studio, ASP, XML, UML, Java Script, VB Script, WML, MTS, Visual Interdev, Visual Site Server, Websphere Application Server, Unix, & Win NT/2000. MS/Equi in CS, MIS, CIS, Eng (any), Bus, Tech, Math or related W/exp. Salary DOE. Email resume to: resumes@relianceglobal.com or mail Reliance Global Services, 51 Cragwood Rd, Ste 101, South Plainfield, NJ 07080 & ref GKN1030.

Apollo Group located in Phoenix, AZ has multiple openings for IT professionals. Specific skill sets needed include:

- .Net developers JO-010
- JAVA/J2EE JO-020
- Data warehousing developers JO-030
- Oracle Developers/DBA JO-040
- Quality Assurance Analysts JO-050
- Systems Administrators JO-060
- Web-based Developers JO-070
- Business Analysts JO-080
- PeopleSoft JO-090

All positions require at least a B.S. degree in related field. Some positions require an M.S. degree. Competitive salaries. Send resume to: apolrecruitment@apollogrp.edu. Refer to specific JO# for consideration. Applicants must have authority to work permanently in the U.S.

Systems Analyst, North Brunswick & other client locations: Coord S/w projects for financial inst using SWIFT Net Application. Dsgn & impl SWIFT Net connectivity projects. Dev interface between SWIFT application & legacy mainframe based financial appln. Dsgn & dev Disaster Recovery Planning & Implementation. Write& dsgn appln using VB.Net, & VS.Net. Duties entail working with Oracle, SQL Server, VB, XML, ASP, VMS, & Win NT/2000. BS/Equi in CS, MIS, CIS, Eng (any), Bus, Tech, Math W/5yrs exp. Salary DOE. Email resume to: info@axletrees.com or mail to Axletree Solutions, Inc, 2 King Arthur Court, Lakeside West, North Brunswick, NJ 08902 & ref KP1002.

PROGRAMMER ANALYSTS:

IQ Softech, Inc. (Piscataway, NJ) seeks programmer analysts to analyze, design and implement client/server and web based applications. Must possess experience with Oracle RAC, ORACLE 10g OCP, SQL Server, HTML, PL/SQL, Solaris, Linux, UNIX, Windows. Candidates should be able to prepare technical and functional specifications. Please apply with 2 copies of resume to HR, IQ Softech, Inc., 200 Centennial Ave. Ste. 200, Piscataway, NJ 08854.

Systems Analyst, Edison, NJ & other client locations: Perform tech & func analysis, sys supp, dsgn spec, config, documentation, testing, & implementation using Informatica Power Center, Power Exchange, PowerMart, SSIS, Business Objects, Oracle 10g, Teradata SQL Server, DB2, Sybase, TOAD, Korn Shell Scripting, T-SQL, Visual Basic, C++, Java, Erwin, Visio, Unix, & Win 2000/XP. BS/Equi in CS, MIS, CIS, Eng (any), Bus, Tech, Math, or related W/2yrs exp. Email resumes: jobsnj@kaizentek.com Or Kaizen Technologies, Inc, 1 Lincoln Highway, Suite 10, Edison, NJ 08820 & ref GSK1034.

Systems Analyst, Irving, TX and other client locations: Involve in SLDC process including, GAP analysis, designing, developing, implementing, testing, configuring, customizing, & maintaining applications and systems using JCL, DB2, SQL, IMS, Oracle, COBOL, MF COBOL, CICS, VSAM, JSP, J2EE, FILEAID, XPEDITER, Informatica, TSO/ISPF, TEST Director, SAP ECC, CRM, ABAP4, MVS/ ESA, Win 2000/ NT/XP, OS390, Solaris, & Unix. BS in CS, CIS, MIS, Eng (any), Math, Bus, Tech or related W/5yrs exp. Salary DOE. Email resume to jobs@mouritech.com

Senior Consultant (Duluth, GA, but may relocate to unanticipated cities across the country): Gather requirements and interface with clients to develop software applications. Send resume to HR, Serenity Infotech, Inc. 2750 Peachtree Industrial Blvd., Ste E, Duluth, GA 30097.

Encyclopaedia Britannica in Chicago, Illinois seeks a Sr. Software Engineer to develop and maintain applications related to EB's electronic product line, customer management systems, and marketing and financial systems. Req's MS in Comp. Sci., Info. Sys. Technology, or related & 2 yrs exp. or equiv. ed/exp. Req's knowledge/exp. with Java, JSP. Apache Struts, Spring 2.0, Apache, Tomcat, Java Script, Prototype/Script.aculo.us/JQuery Javascript libraries, JFC, Tag Libraries, XML (SAX/DOM), XSLT, SGML, framework, Oracle (JDBC), PostgreSQL, and Unix. EOE. Apply to: staffing@eb.com job code: SWK3604

System Analyst, Falls Church, VA & other client locations: Analyze, design, develop, implement & customize application & system based on user needs using Oracle AS, Oracle 10g, J2EE, Apache, JDeveloper, OOAD, RUP, ANT, TOAD, Oracle XMLP,OID,Java,C,C++, WinRunner, JUnit, Erwin, Designer 6i,Solaris,Unix,Linux, Win NT/2000.BS in CS,CIS, MIS,Eng(any),Tech, Bus, Math, or related W/5yrs exp.Salary DOE. Email: hr@aarisha.com or mail Aarisha Inc, 900 S. Washington Street, Suite #212, Falls Church,VA 22046.

Systems Analyst, Eatontown, NJ and other client locations: Analyze, dsgn, dev, architect, customize, impl, & maintain applns and sys based on user needs using .NET framework, C#, VB.Net, ASP.Net, ADO.Net, VS.Net, Oracle, SQL Server, VSS, Visual Studio, Crystal Reports, Java Script, VB Script, Visual Interdev, Java, IIS, Web Services, JDBC, C++, Unix, & Win NT/2000/XP. BS in CS, MIS, CIS, Eng (any), Tech, Mgmt, Bus, Math, or related W/5yrs exp. Salary DOE. Mail resumes to HR, HOV Services, 40 Corbett Way, Eatontown, NJ 07724 or email at: anish@hovservices.com & ref RKD1004.

Scientific Programmer Analyst with experience in industrial automation. Send resume to HR Dept., InduSoft LLC, 3445 Executive Center Dr., Suite 212, Austin, TX 78731. Must reference job code CSR10.

OBIEE Architect, Monroe Township, NJ: Analyze, design, develop OBIEE modules/architecture; Lead OBIEE team. Refine existing solutions/customize Modules using ETL tools/technologies. Work with Siebel (Siebel tools), DW, DAC, Informatica, Lotus Notes, in multiplatform environment. Troubleshoot, maintain existing applications. Reply to: Sairav Consulting, Inc., 11 Scenic Way, Monroe Township, NJ 08831

Technicolor, Inc. is seeking a Chief Engr for its Santa Monica, CA lctn to manage Engnrg Dept & oversee complete design, implementatn & maintenance of all equipt & hardware. Must have a Master's deg or equiv in Electrical Engnrg, Comp Sci, or rltf fld + 2 yrs wk exp in rltd occcptn of UNIX/Linux systm admnstrtn & SAN architecture. Salary DOE. Send cov ltr & resume to Technicolor, Inc., HR – Job # 000CE09, 2255 N. Ontario Street, Suite 250, Burbank, CA 91504.

Vision IT Service has openings for System Administrator/Analysts, S/W Engineers or DBA using Oracle, SAP, DB2, Java, VB.Net, WebLogic, WebSphere etc per project requirements. Minimum MS or BS+1-5yr IT exp. Travel required. Apply hr@visionit.com.

HIDEF Technologies seeks system analyst/admtor, s/w engineer, DBA to design and customize applications using skills such as Oracle, DB2, Java, EJB, WebTech, VB, C/C++, etc. Require MS/BS with 1-5yr exp. Travel required. Apply at info@hideftech.com. EOE

Synertech Inc in Orange CA seeks a Software Eng with Masters in Comp Sci or Wireless Eng and one year of experience as a Software Eng. Mail resume to Joe Neria CEO at 1241 W Collins Ave Orange CA 92867 or fax to 714-628-8967

Labor Certification Ads

Are you an individual, agency or law office needing to place ads to fulfill legal requirements?

Let us help you put together an efficient, cost effective program that will help you place your ads quickly and easily.

For more details, contact us at:
800.762.2977

IT|careers

SharkTank

TRUE TALES OF IT LIFE AS TOLD TO SHARKY

Stop Making Sense!

Part of this IT pilot fish's job is to design custom programs to meet his users' needs. "Occasionally a new supervisor will try to make a name for himself by coming up with a, um, brilliant new idea," fish says. "Recently I was asked to attend a meeting by a manager whose supervisor had an idea he called 'revolutionary.' " Supervisor: "I need an application designed that will notify my people *immediately* when a certain situation occurs. It needs to pop up a message on their computer screen." Fish: Why a new application? Why not just create an e-mail distribution list? Supervisor: "Because sometimes my people don't have their e-mail open." Fish: Then you need to tell your people to keep e-mail open. What will keep them from not running this special application? Supervisor (face starting to turn red): "Then the application needs to be set up so it will run when they log on and they can't close it." Fish: What if they leave their desks? Supervisor: "Uh, then they will see it when they get back!" Fish: Look, if it's so important, why don't you just call the necessary people on their phones? You only have five people in your department. "That's when the manager jumped in and said, 'We'll call you later,' " says fish. "That was three weeks ago. I haven't heard from them."

From the Help! Desk

At the company where this IT pilot fish works, the help desk has come up with a new standard approach for cases when no one's quite sure which tech to route a trouble ticket to – and it's a pretty ingenious approach. "It appears that they search the headers for previous tickets on the same problem application," says fish. "They're looking for the names of anyone who has touched a ticket for that application before. Then they route the ticket to that person with this piece of boilerplate: *Previous records indicate that you have solved problems with this software before, although we don't have any documentation that supports this routing. Please assist if possible, or if out of your scope, suggest us with an alternate destination for this ticket.* We're not sure what it means that 'records indicate' when they 'don't have any documentation.' "

System Zzzzz . . .

It's 2 a.m. when this mainframe pilot fish's phone rings. "My wife answered the phone and shoved it in my ear," says fish. "After listening to the mainframe operator's problem, I replied with an action for him to take. In the morning, my wife asked, 'What was the call about last night?' 'What call?' I replied. I had absolutely no memory of it. At work I read the nightly report about the call. What I told them fixed the problem, and I could now pretend I remembered it."

■ *Remember to send Sharky your true tale of IT life at sharky@computerworld.com. You'll snag a snazzy Shark shirt if I use it.*

COMPUTERWORLD.COM

TIRED OF BUNGLING BOSSES and clueless co-workers? Swim on over to Shark Bait and share your tales of woe. **sharkbait.computerworld.com**

CHECK OUT Sharky's blog, browse the Sharkives and sign up for Shark Tank home delivery at **computerworld.com/sharky.**

■ COMPANIES IN THIS ISSUE

Page number refers to page on which story begins. Company names can also be searched at computerworld.com

Accenture PLC 6
Analysys Mason 10
Apple Inc. 10, 16, 32
AT&T Inc. 29
BigFix Inc. 12
Children's Hospital of Orange County 30
Cisco Systems Inc. 14
Cloud Security Alliance. 40
Computer Sciences Corp. 40
Dice Inc. 36
Double Eagle Steel Coating Co. 6
Econstruction 24
eHealth Inc. 24
Facebook Inc. 14, 32
Fidelity Investments 26
FireFly Facilitation Inc. 29
Florida State College at Jacksonville 34
Forrester Research Inc. 10, 19
Gartner Inc. 4, 10, 19
Google Inc. 10, 16, 40
Hewlett-Packard Co. 10
Highmark Inc. 6
Howcast Media Inc. 25
IDC 10
Ingres Corp. 20
Intel Corp. 12
Intelligent Hospital Systems 30
IT Leadership Academy 34
J.Gold Associates LLC 10
Long Lines 12
Manager Mechanics LLC 28
Mariposa Leadership Inc. 28
McAfee Inc. 12
Microsoft Corp. 22, 32
Monster Worldwide Inc. 26
Motorola Inc. 14
Naval Meteorology and Oceanography Command 34
New York State Office of Temporary and Disability Assistance 18
Nokia Corp. 10
Northeastern University 30
NPC International Inc. 19
Ohio Office of Budget and Management 34
Oracle Corp. 22, 24
Palm Inc. 10
Ponemon Institute LLC 6
Power Enterprises 30
Pund-IT Research 10
Purdue University 6
Red Hat Inc. 20
Research In Motion Ltd. 10
Rubicon Consulting Inc. 31
Salesforce.com Inc. 20
SANS Institute 12
Save Mart Supermarkets 20
SpringSource 20
Storage Networking Industry Association 4
Stratus Technologies Inc. 6
Sybase Inc. 31
The 451 Group 18, 22
The Conference Board 36
The McNeill Group 28
Twitter Inc. 14
U.S. Department of Defense 34
U.S. Environmental Protection Agency 4
University Readers Inc. 20, 22
Women in Technology International 14

ADVERTISERS INDEX

1&1 Internet 21, 23
APC 11
Brasscom 35
Citrix 8-9
Citrix GoToAssist Express 17
dtSearch 37
Eset 5
Google C4
IBM IT Intel 7
IBM Power 7 ....C3
ITWatchDogs 37
Microsoft BIEB 15
Microsoft Cloud Computing C2
Microsoft Open Source 27
Oracle 33
Research in Motion 3
Sprint 13

This index is provided as an additional service. The publisher does not assume any liability for errors or omissions.

Periodical postage paid at Framingham, Mass., and other mailing offices. Posted under Canadian International Publication agreement PM40063731. **CANADIAN POSTMASTER:** Please return undeliverable copy to PO Box 1632, Windsor, Ontario N9A 7C9. Computerworld (ISSN 0010-4841) is published twice monthly by Computerworld Inc., 492 Old Connecticut Path, Box 9171, Framingham, Mass. 01701-9171. Copyright 2010 by Computerworld Inc. All rights reserved. Computerworld can be purchased on microfilm and microfiche through University Microfilms Inc., 300 N. Zeeb Road, Ann Arbor, Mich. 48106. Computerworld is indexed. Back issues, if available, may be purchased from the circulation department. Photocopy rights: permission to photocopy for internal or personal use is granted by Computerworld Inc. for libraries and other users registered with the Copyright Clearance Center (CCC), provided that the base fee of $3 per copy of the article, plus 50 cents per page, is paid directly to Copyright Clearance Center, 27 Congress St., Salem, Mass. 01970. Reprints (minimum 100 copies) and permission to reprint may be purchased from Ray Trynovich, Computerworld Reprints, c/o The YGS Group, Greenfield Corporate Center, 1808 Colonial Village Lane, Lancaster, Pa., 17601, (800) 290-5460, Ext. 148. Fax: (717) 399-8900. Web site: www.reprintbuyer.com. E-mail: computerworld@theygsgroup.com. Requests for missing issues will be honored only if received within 60 days of issue date. Subscription rates: $5 per copy. Annual subscription rates: – $129; Canada – $129; Central & So. America – $250; Europe – $295; all other countries – $295. Digital annual subscription rate: $29.99. Subscriptions call toll-free (888) 559-7327. **POSTMASTER:** Send Form 3579 (Change of Address) to Computerworld, PO Box 3500, Northbrook, Ill. 60065-3500.

■ OPINION

Scot Finnie

Cloudburst

CLOUD COMPUTING is starting to become real. I say that not because senior IT leaders at three of *Computerworld*'s most recent conferences — Premier 100, SaaScon and SNW — couldn't stop talking about it, but because we're moving out of the "Why should I do this?" stage and into the "How can I do it?" phase.

What's more, the blind fervor is gone, replaced by healthy skepticism and active grappling with the frustratingly complex issues that need solving before CIOs will feel comfortable signing up with software-as-a-service, platform-as-a-service or infrastructure-as-a-service vendors. Many see the potential benefits of at least one of these cloud-based services for their organizations, but they need vendors to clear a number of hurdles before they will seriously consider adopting services-based IT.

You've heard the litany of concerns before: security, privacy, compliance, liability, vendor lock-in, customization, service levels, performance, support and so on.

That's what made the opening presentation at SaaScon 2010 last month so interesting. Kevin Crawford, assistant director of IT for the city of Los Angeles, spoke about the terms of the city's agreement to outsource all of its e-mail to Google. L.A. negotiated the deal through CSC, its direct supplier, and it got CSC to negotiate with Google in turn.

Crawford mesmerized the SaaScon audience by describing a long list of concessions that it won during its negotiations with CSC. Among them: L.A. can pull out of the contract without cause, and CSC will return any prepaid fees for the balance of unused time; the city will receive payment of liquidated damages in the event of liability due to any sort of breach or damage to data, and unlimited damages should Google ever violate the city's nondisclosure agreements; it will get a mounting refund in cash or rebates if downtime exceeds five minutes per month; Google employees are barred from looking at L.A.'s data in clear text without written permission; Google will keep data in the U.S.; and, of course, the city always owns the data.

■ Cloud vendors can't just expect their IT customers to pay every month and shut up.

The audience was clearly wowed by the success that Los Angeles had in addressing concerns that most CIOs share when it comes to placing data in the hands of a third party. As Crawford fielded 20 or so questions from the intensely curious group, you could see the wheels turning in scores of minds.

Of course, Los Angeles has some weight to throw around. Smaller IT organizations can find it difficult to get vendors to listen. The Cloud Security Alliance, a nonprofit organization whose executive director, Jim Reavis, spoke at SaaScon, is one place to look for help. Although its membership is largely made up of vendors, the Cloud Security Alliance offers interesting research and is pushing for a better cloud marketplace.

For cloud computing to flourish, it needs a set of standards that IT leaders can feel safe with. SAS 70, an auditing standard, is a start. But it covers only some of CIOs' concerns about SaaS and cloud. In order to grow, smart SaaS vendors need to come together, in conjunction with IT customers, to figure out a standard set of service levels, metrics and protections for security, performance, vendor lock-in, liability and so forth. Cloud vendors can't just expect their IT customers to pay every month and shut up. Senior IT leaders also have to tell cloud vendors what they need to make this work. Los Angeles did it. You can too.

Cloud is still a long way from taking off in a significant number of IT organizations. But with the economy showing signs of waking up, cloud is starting to take shape as it emerges from the hazy hype. It's not going to be easy, but it's also not just a fantasy. This time, it's for real. ■

Scot Finnie *is* Computerworld*'s editor in chief. You can catch him on Twitter, where he tweets as @scotfinnie, or e-mail him at sfinnie@computerworld.com.*

Power your planet.

We live on a planet where nearly 6 terabytes of information are being exchanged over the Internet every second, and where billions of connected people are surpassed in number, only by trillions of connected objects and devices. Why then is the average server in the average business running at only 10% utilization? It's hard enough for businesses to meet the demands of a smarter planet today, much less the unforeseen demands of tomorrow. The new POWER7 Systems™ from IBM are not simply servers—they're fully integrated systems with the ability to run hundreds of virtual servers, helping you drive up to 90% utilization. These next-generation systems integrate massive parallel processing, throughput computing and analytics capabilities to optimize for the complex workloads of an increasingly data-driven world. Learn how to power your planet at ibm.com/poweryourplanet

Smarter systems for a Smarter Planet.

IBM®

Sources for claims can be found at www.ibm.com/power/p7claim. IBM, the IBM logo, ibm.com, POWER7 Systems, Smarter Planet and the planet icon are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. A current list of IBM trademarks is available on the Web at www.ibm.com/legal/copytrade.shtml. © International Business Machines Corporation 2010.

- ☑ Share docs from Borneo.
- ☑ Upload photos from Giza.
- ☑ Email from Siberia.
- ☑ Video chat from Quito.
- ☑ Edit presentation from D.C.

National Geographic has gone Google.

"Going Google" means switching your business to Google Apps: an online email, calendar, and document program that's based on the web. Learn more at www.google.com/gonegoogle.

© 2010 Google Inc. All rights reserved. Google and Google logo are trademarks of Google Inc.
All other company and product names may be trademarks of the respective companies with which they are associated.

Google Apps